IRENA
International Renewable Energy Agency

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INTERNATIONAL RENEWABLE ENERGY AGENCY
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Proposed Work Programme and Budget for 2014-2015

Report of the Director-General

1. The proposed Work Programme and Budget for 2014-2015 has been prepared in accordance with Articles XI.E.1. and XII.B. of the IRENA Statute, and in light of Assembly Decision A/3/DC/12, which approved a biennial work programme and budgetary cycle effective 2014-2015 as the first biennium.

2. In accordance with Article IX.G.2., the document will be considered by the Assembly.

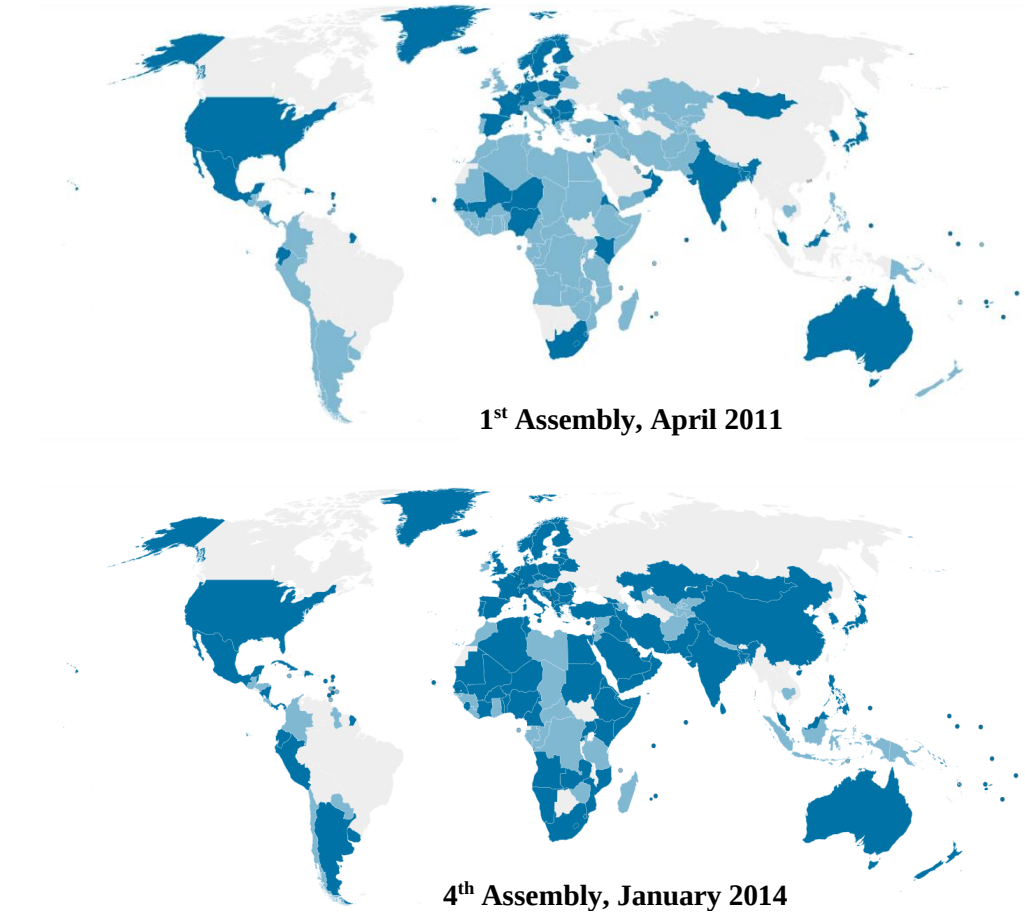
Proposed Work Programme and Budget for 2014-2015

Contents

Introduction

1. The International Renewable Energy Agency (IRENA), the first intergovernmental agency of the 21st century, will mark the third year of its formal existence in 2014. Since its establishment in April 2011, IRENA has seen substantial growth. Its membership has doubled to over 120 Members with some 40 additional states at various stages of accession to membership. IRENA's activities, budget and staffing have grown significantly attesting to the strong sense of ownership of its Members, the relevance of the Agency's activities to current realities, and the tremendous opportunity that exists today to transition to a safe, secure and reliable clean energy future. Due to increased understanding of potentials, technologies, costs and successful business models, the international community is poised to embark on an ambitious new phase of renewable energy deployment that will serve to address some of the critical challenges the world faces today.

IRENA's Growing Membership



2. Economic, demographic and energy consumption trends and concerns around the environment and climate change are sharpening the focus on the necessity for an energy transition with the objective of economic, social and environmental sustainability. Population is projected to grow from seven billion today to an estimated nine billion in 2050, less than 40 years into the future. This comes with an increase in affluence and growing energy consumption and demand in fast developing and populous countries. These trends bring an added urgency to the global commitment to provide sustainable energy to all countries as well as to provide access to modern energy services to the 1.4 billion people who do not have access to electricity and to the 3 billion who continue to rely on solid fuels for cooking and heating.

3. To ensure a future of economic prosperity and improved quality of living for all, fundamental changes to the current energy mix and a move to a sustainable energy system are paramount requirements. The most recent Intergovernmental Panel on Climate Change (IPCC) report points to the unequivocal human impact on climate change driven predominantly by burning fossil fuels. For the first time, the report provides a global budget for emissions which cannot be exceeded if devastating levels of global warming are to be prevented. The need for dramatic efforts to reduce carbon emissions has never been greater.

4. The urgency to act is increasingly evident around the world: extreme weather events that have demonstrated the vulnerability of rich and poor countries alike have caused devastating damage around the world. The re-insurance company MunichRE estimates total economic losses of over USD 150 billion due to these events in 2012. This reality requires practical and urgent action to increase the resilience of countries and energy systems. Renewable energy is increasingly seen as one of the major opportunities to decarbonise energy on the basis of an economically viable scenario that can also contribute to growth, employment and sustainability. Discussions covering future policy are taking place in diverse settings. In Europe there is an ongoing discussion of future targets while in the recent Pacific Islands Forum (PIF) Majuro Declaration, concrete and ambitious targets for renewables deployment were made as a sign of the commitment to act on climate change. This call for action is mirrored in different international fora as the 2015 milestone of climate negotiations approaches.

5. Countries around the world are already taking decisive action. When IRENA was established, 118 countries had some type of a renewable energy target or policy in place. Less than three years later, 138 countries have defined renewable energy targets, and 127 have policies in place to facilitate the deployment.[1] Global electricity generation from renewable sources increased by 18 percent, almost 800 TWh. Photovoltaic (PV) generation accounts for nearly one-eighth of this total– a staggering 237 percent increase since 2011.[2]

6. The deployment of renewables, encouraged by support policies to overcome barriers and rapid learning rates, has led to substantial cost declines. IRENA's costing studies show that PV module prices have fallen by two thirds in two years. The levelised cost of electricity continues to decline

[1] Source: REN21.
[2] Source: IRENA.

for wind, photovoltaics and concentrated solar power, while hydropower and geothermal electricity produced at good sites remain the least expensive way to generate electricity. These positive trends have a wider economic impact. IRENA estimates that 5.7 million people worldwide were working directly or indirectly in the renewable energy sector in 2012.

7. At the same time, protracted economic turbulence and industry restructuring in the face of policy change, together with the falling costs of renewable energy technologies, have shown a decrease in the financial value of new investments globally, although capacity additions have been steady. Nevertheless, renewables remain a dynamic and increasingly mature industry. Renewable energy is getting to where it belongs – an important component of the energy mix, available in some form anywhere in the world, economically competitive, technically viable and socially and environmentally beneficial.

8. Global new investment in 2012 however also reflects an evolution in global markets. The flow of renewable energy investment into emerging markets and developing countries peaked in the same year with a record USD 112 billion[3], and policy-makers in those markets are actively examining their renewables potentials and investment plans. IRENA has supported 18 developing countries in undertaking the Renewables Readiness Assessment (RRA) to help realise local potentials by creating enabling frameworks to attract investment. This process has yielded concrete results and the methodology has become a sought-after tool, with an increasing number of countries requesting IRENA's support, and holds the potential of being a transformative tool of the future.

9. The evolution of the existing energy architecture and its development into a dynamic low carbon and economically vibrant system over the next 40 years can be a major plank of a global strategy to achieve sustainable development. Political and policy traction, coupled with the rapid development of renewable energy technologies and their falling costs, are expanding the menu of energy choices for countries. If the Agency is to attain its long-term objective of accelerating the deployment of renewables to address the new set of challenges that confront all of its Members, an effective, focused and results-oriented approach that has the confidence of Members is crucial.

10. Encouraging signs of future growth can be found around the world. IRENA's roadmap for doubling the share of renewables by 2030 – REMAP2030, provides positive insights. In addition, Bloomberg New Energy Finance projects a likely scenario of a 230% growth in investments in renewable energy power capacity by 2030, driven by cost competitiveness in wind and solar technologies relative to fossil fuel alternatives, as well as an increase in the roll out of renewable energy sources like hydro, geothermal and biomass. The role of the Agency must therefore be directed to supporting Members to achieve this ambition.

[3] Source: BNEF.

Strategic Direction

11. It is within this context that the Members provided strategic direction and guidance to IRENA through its Medium-term Strategy 2013-17 (MTS). The MTS defines the vision that underpins IRENA's programmatic activities: to be the principal platform for international cooperation, a centre of excellence on renewable energy and a repository of policy, technology, resource and financial knowledge, and to support countries in their transition to a renewable energy future. In recognition of the progress made in the work of the Agency and in order to develop its capacity, Members decided that the programme should move to a biennial approach for its Work Programme and Budget to provide a stable and predictable framework for the Agency's activities.

12. IRENA has restructured its programmatic divisions to better enable strategic choices, the alignment of activities and their efficient implementation. Through its Knowledge, Policy and Finance Centre (KPFC) and Innovation and Technology Centre (IITC), IRENA undertakes a range of analytical and advisory activities aimed at providing accurate information, sound advice and a broader knowledge base to assist countries to make informed renewable energy policy decisions. During the 2014-2015 period, this work will be the basis of the creation of a definitive global knowledge gateway for renewable energy. The Country Support and Partnerships (CSP) division supports countries in translating these decisions into action-oriented strategies, and in enhancing their capacity to devise, manage and regulate plans and projects. In 2014-2015, CSP will strengthen and expand its crucial support functions at regional and national levels.

13. With the changing world as the backdrop, and building on its core strengths, IRENA's implementation of the work programme will focus on making the next step-change in advancing its mandate of promoting and accelerating the widespread deployment of renewable energy. It is for that reason that IRENA has organised its Work Programme around a set of objectives and impacts responding to Members' needs, building upon the strengths and expertise of programmatic divisions, and further developing synergies within the programme. To support the priorities and needs of countries and regions, and to capture global trends and changes, IRENA will contribute towards the following objectives:

- Mainstreaming renewable energy options and strategies in energy plans;
- Making renewable energy knowledge accessible to all;
- Improving policy frameworks and enabling market conditions for accelerated deployment of renewable energy;
- Contributing to sustainable livelihoods through access to renewable energy;
- Transforming island energy systems through renewable energy; and
- Regional cooperation on increasing deployment of renewables, to meet growing energy demand.

14. The proposed objectives are not independent of each other, nor can they be achieved by any single actor or set of activities. IRENA will align its approach to leverage its strengths and resources with the efforts made by other partners. To provide timely and quality expertise, and complement the efforts of countries and other stakeholders active in the field, IRENA will concentrate on six substantive thematic areas:

- Planning for the global energy transition;
- Gateway to knowledge on renewable energy;
- Enabling investment and growth;
- Renewable energy access for sustainable livelihoods;
- Islands: lighthouses for renewable energy deployment; and
- Regional action agenda.

15. Within these thematic areas, the Work Programme is structured along common projects and initiatives to maximise synergies, avoid duplication, and ensure the most efficient use of resources. Each of the thematic areas contains a proposed budget reflecting combined core budget and voluntary contributions from Germany and the United Arab Emirates.

16. As the principal platform for international cooperation on renewable energy, partnerships remain embedded in every aspect of IRENA's programmatic activities. In response to the request of its Members and a wider international community, IRENA will actively pursue an inclusive approach to its recognised role as the Renewable Energy Hub within the United Nations Secretary-General's initiative, Sustainable Energy for All (SE4ALL), to mobilise stakeholders around the aspirational goal of doubling the share of renewable energy in the global energy mix by 2030.

17. In view of the international conversation on sustainable development and climate change, and given the important role that renewable energy plays in this context, IRENA will seek to maximise the positive contribution to upcoming global events including the UN Secretary-General's Climate Change Summit, and the Third International Conference on Small Island Developing States in 2014. It will continue to contribute to international and regional initiatives, such as the International Renewable Energy Conference (IREC), the World Future Energy Summit (WFES), the Clean Energy Ministerial (CEM), and Middle East and North Africa Renewable Energy Conference (MENAREC). The Agency will also seek to leverage financing opportunities for renewable energy through cooperation with relevant entities, such as the Green Climate Fund.

18. Robust and comprehensive communications and outreach that leverage strategic partnerships, deliver strong messages, amplify IRENA's voice and drive awareness, are vital to galvanise the support needed to effect lasting change. One of the Agency's greatest strengths rests in its wide membership and active engagement of countries in its work. IRENA will tap into this resource to embed its messages and disseminate its products at country and regional levels worldwide. IRENA's interaction with Members – from regular contact with permanent representatives at the seat of the Agency, through the network of focal points, to visits to countries upon invitation, will ensure a strong relationship and continuous sense of ownership by Members.

19. IRENA will collaborate with stakeholders across sectors of society and beyond traditional boundaries. Experience to date has shown that new ways of collaboration are needed to overcome bureaucratic and resource-intensive layers. It is for this reason that IRENA is pursuing a concept of decentralised leadership, which will allow stakeholders and in particular the private sector to convene and collaborate around thematic issues of common interest. This approach has already been applied to the Agency's work with islands through the Global Renewable Energy Islands

Network (GREIN) and the development of cooperative initiatives with the private sector, and will be extended to new constituencies in the coming years.

20. IRENA's ambitious mission requires an institution that meets benchmarks for organisational effectiveness that match or exceed the highest standards and expectations of its Members. It is for this reason that IRENA's administrative and management functions will remain subject to scrutiny, with the emphasis on continuous improvements and added efficiencies. With the internal audit function in place, the Agency is benefiting from a systematic identification of potential risks and, if required, early remedies. The emphasis in the coming years will be to further strengthen programme coordination and delivery through effective project planning, design, and implementation, underpinned by the now fully operational Project Management Office (PMO) and the link to the Enterprise Resource Planning (ERP) software. As requested by Members, and to strengthen the reach of the Agency's work, the proposed Work Programme and Budget comprises the use of different languages, on a case by case basis, as driven by programmatic needs.

21. The Proposed Work Programme and Budget for 2014-2015 was developed in close collaboration with the membership, leading up to the sixth Council meeting. This process has enabled the Agency to set out the priorities to ensure its significant and sustained impact and, drawing on IRENA's strengths, demonstrate the unique value of its mission. In order to fulfil this commitment, the Agency will need to achieve a level of critical mass in its core budget that will be essential to its strengthened role. IRENA has established a light, transparent, accountable, and reliable administrative framework that has enabled the Agency to maintain responsiveness and timeliness in its transactions.

22. As IRENA's membership increases, so do the expectations and demands placed on the Agency and its limited resources. The Proposed Work Programme and Budget recognises that the Members' level of ambition for IRENA cannot be reached with the core budget alone, considering today's economic and financial realities that many are facing. It therefore includes a range programmatic activities that would strengthen the impact of IRENA's work, but would require additional voluntary contributions to be mobilised.

Thematic Programme Areas

I. Planning for the global energy transition

Objective: Mainstreaming renewable energy options and strategies in energy plans

23. Following the success of the 2012 International Year for Sustainable Energy for All (SE4ALL) which saw the launch of the United Nations Secretary-General's SE4ALL initiative and growing attention to sustainable energy worldwide, the international community recognised the need for concerted international action to ensure a sustainable energy future and declared 2014 as the beginning of the International Decade for Sustainable Energy for All. This decision of the United Nations General Assembly highlights the global consensus of the urgent need to address energy challenges, climate change and the imperative of sustainable development and accelerated international cooperation on sustainable energy.

24. In this context, IRENA provides an inclusive, action-oriented platform for accelerating the deployment of renewable energy. In recognition of its central role, IRENA has been nominated the Renewable Energy Hub within the UN SE4ALL initiative – the UN Secretary-General's call for global action around three aspirational goals: to provide access to all, double the rate of energy efficiency and double the share of renewable energy in the global energy mix by 2030.

25. As the SE4ALL Renewables Hub, IRENA is ideally positioned to draw on its established strengths. In order to provide an inclusive framework and bring together all actors, IRENA has started the development of a Roadmap for doubling the global share of renewable energy by 2030 – REMAP2030 – by identifying policy needs, highlighting opportunities for international cooperation and possible technology options. In the coming biennium, REMAP2030 will be a tool for action and a framework for the analysis and review of opportunities for transformational change.

26. In a rapidly-changing world, the global trend towards urbanisation continues and cities represent the next frontier for renewable energy development. By 2050, cities will be home to two thirds of the world's population and account for the bulk of energy demand. Building on the work done to date, IRENA will highlight opportunities for the deployment of renewables in cities and bring together critical actors to develop sustainable energy strategies for urban areas.

27. With increasing populations, economic growth and soaring energy demand, many developing countries are faced with the urgency of making investment decisions for growth in energy consumption to fuel development. It is critical that such decisions take account of renewable energy options and establish policy and technology frameworks that enable the full potential of renewables to be realised. The IRENA Renewables Readiness Assessment (RRA) process, already

undertaken in 18 countries, has become a recognised and important tool in assisting countries to develop effective enabling renewable energy policy and regulatory frameworks and assess the potentials and regulatory options. In the face of strong demand for these services, IRENA will strengthen and expand its RRA and advisory service programme for an increased number of countries, and create regional pools of experts to support this process.

28. Planning is a vital element of successful renewable energy deployment and, while it only represents a fraction of the deployment costs, its potential as an effective instrument needs to be developed. To help mainstream renewables in energy planning, IRENA will continue to support its Member countries in understanding institutional and infrastructure transition requirements by providing capacity building and planning tools, and seek to facilitate decision-making on key issues, such as difficult trade-offs affecting energy, water and land use. Growth strategies must account for interrelated environmental constraints and meet the aspirations of countries and individuals for social and economic development to ensure sustainability.

29. **SE4ALL Renewables Hub.** As the only global intergovernmental organisation dedicated solely to renewable energy, IRENA is uniquely positioned to take a lead role in advancing the aspirational goal of doubling the share of renewables in the global energy mix. SE4ALL represents an opportunity for IRENA to influence the global debate and promote renewable energy to a new range of stakeholders, and to share IRENA's agenda and priorities through the SE4ALL network. IRENA will engage with those who have made specific commitments to renewable energy within the Initiative and in the context of different SE4ALL High Impact Opportunities (HIO) on issues of relevance to its programmatic agenda, such as work on islands, cities, off-grid lighting and the water-energy-land Nexus. Close cooperation with other SE4ALL hubs, as well as the Global Facilitation Team, will be central to this work. IRENA will work closely with regional banks to ensure synergies and complementarity of effort with IRENA's activities in regions. A formal framework of cooperation will be established with the World Bank, a Knowledge Hub, to leverage respective strengths in the area of renewables. In partnership with the SE4ALL Energy Efficiency Hub in Denmark, IRENA will promote the necessary and inseparable link between renewables and energy efficiency. The SE4ALL Renewables Hub component will be led by IITC, with support from CSP and KPFC.

Activities: IRENA will develop an inclusive cooperation framework for its SE4ALL Renewables Hub function, integrate SE4ALL objectives into IRENA activities relevant to SE4ALL and develop a forward looking renewable energy reporting framework for 2030. IRENA will complement these activities by developing policy recommendations and technical advisory services related to High Impact Opportunities (HIO) and provide additional support for the Hub by analysing selected issues with the focus on implementation and practical application.

Impact: Established platform for cooperation and concerted action by stakeholders to accelerate deployment of renewable energy.

30. **REMAP2030.** It is expected that global power sector investment until 2030 will be over USD one trillion annually. In the course of 2013, IRENA has worked with twenty-six countries – representing three quarters of the global energy use – within the REMAP framework to ascertain the potentials and estimate cost of options for the accelerated deployment of renewables within this investment scenario. The initial findings of REMAP2030 conclude that a global energy system with one third share of renewables in 2030 is feasible and would provide added investment opportunities, while keeping the system costs of energy at the same or lower level. REMAP2030 aims to demonstrate that, given a strong and concerted commitment by all stakeholders, doubling the global share of renewable energy is achievable. In the course of 2014-2015, IRENA will create Action Teams of interested countries and other stakeholders to work together under the REMAP2030 umbrella on specific issues such as transportation, joint strategies for renewables and energy efficiency, and other areas that could have a transformative impact on the deployment of renewables. IRENA will also expand the range and scope of technology, geographical and topical work to provide a sound knowledge base for efforts made toward sustainable energy for all. REMAP2030 will be led by IITC and supported by KPFC.

Activities: IRENA will deepen the REMAP2030 analytical framework and develop guidance on possible pathways, technology and policy options and international cooperation, as well as additional country and regional analysis. This will be accomplished in part through the creation of three REMAP action teams; two on substantive themes (transport, renewables and energy efficiency) and one to support the SE4ALL RE Hub initiatives. The development of Technology Briefs with concise, policy-relevant and objective information on technology solutions coupled with an assessment of the socio-economic impact of renewable energy deployment in REMAP2030 will further support the REMAP process.

Impact: Comprehensive and acknowledged roadmap on options and action for doubling the share of renewable energy by 2030.

31. **REpowering Cities.** The challenge of sustainability is particularly acute in rapidly growing cities around the world. As cities grow, a range of energy-related issues must be addressed: how to generate power, how to conserve energy, what will be the source of heating and cooling, and what will power the mobility of these dynamic settings. Through strong partnerships and engagement, including with local decision-makers and city-focused organisations such as UN Habitat and ICLEI, IRENA will advocate the greater uptake of renewables in cities. It will seek to enhance the renewable energy component of existing assessment methodologies for cities and identify policy solutions for some of the common challenges. This will help prioritise renewable

energy interventions for cities and illustrate best practices for deployment. IRENA will actively engage in the Global Sustainable Cities Network to reach out to new constituencies to advance the renewables agenda in cities. Repowering cities will be led by CSP and supported by KPFC.

Activities: IRENA will address energy-related issues in cities by undertaking assessments to identify relevant renewable energy deployment options to complement energy efficiency measures and by building a systematic approach for expertise and knowledge transfer in waste-to-energy, solar PV, solar thermal, and heating and cooling. This will be accomplished in part through technical assistance and peer-to-peer learning. IRENA will also identify and promote successful renewable energy deployment business models and analyse policies for the deployment of RE in Cities.

Impact: Increased awareness, partnerships and technical support to local governments on renewable energy options in cities.

32. **Water, Energy and Land Nexus.** The multifaceted challenges to the sustainable management of the water, energy and land nexus is a major aspect of international discussions. External factors such as growing populations, rapid urbanisation and climate change are increasingly seen as interconnected, as is the fact that renewable energy technologies will play a crucial role in addressing the optimal management of integrated resources. In 2013, IRENA analysed the existing knowledge of renewable energy and the nexus, identified specific knowledge gaps, and developed the conceptual framework for an empirical tool to measure the impact of renewable energy integration in the nexus. This was done in collaboration with the governments of Germany, the UAE, Texas A&M University, and the Qatar Environment and Energy Research Institute (QEERI). IRENA will expand its activities to bridge the identified knowledge gaps on the interlinkages and the role of renewable energy in the Nexus by developing quantitative analysis on selected country case studies, which will benefit from a consultative process with Member States and other stakeholders. A comprehensive analytical and empirical approach will inform policy making in designing strategies and decision-making at all levels that emphasises the integrated management of resources, with a focus on promoting renewable energy deployment. The Water, Energy and Land Nexus component will be led by KPFC with support from CSP.

Activities: In support of the Nexus approach, IRENA will build upon its work on the role of renewable energy in the Nexus by developing an empirical policy framework and deploying an energy-centric tool that will allow policy-makers to empirically assess the impact of renewable energy on the three elements of the Nexus. IRENA will also conduct quantitative analyses of selected country case studies to bridge the existing knowledge gaps on the benefits associated with renewable energy deployment from a Nexus perspective.

Impact: Analytical and empirical framework for informed cross-sectoral policy and decision-making in resource-constrained environments.

33. **Transforming Power Grid Infrastructure.** The global share of variable renewable power generation, led by wind and solar energy, has increased more than fivefold between 2005 and 2012 creating new challenges for traditional grid operators. Introduction of higher shares of variable renewables in existing grids has to take into account stability and quality of supply and appropriate management systems. Several countries are already managing grid systems with more than 20% of annual power consumption produced by variable renewables. In order to increase the share of variable renewables further, electricity systems require enabling technologies to flexibly manage the power supply and demand. IRENA has analysed the technologies, policies and regulatory frameworks required for the integration of renewables into electricity grids. It has also provided specific technical methodologies and tools to assess the grid infrastructure to enable the integration of renewables into electricity grids. Building on the work to date, IRENA will examine how storage and grid technology options can facilitate renewable energy integration in more complex grids. IRENA's methodology for grid stability assessments will be enhanced to support the Member countries' ambitious targets for a higher share of renewables in electricity systems in a variety of settings. Transforming Power Grid Infrastructure activities will be led by IITC.

Activities: In order to encourage the integration of power grid infrastructure, IRENA will refine the grid-stability assessment methodology for application in different settings and regions, and develop technical guides and recommendations on the latest advancements in RE integration technologies and feasibility of grid and storage options IRENA will particularly focus on AC and DC transmission and interconnectors, practical deployment of smart grids and mini-grids, the role of grid quality standards for renewables equipment and the impact of variability on power sector market mechanisms and business models.

Impact: Comprehensive knowledge, resources and guidelines for grid and storage technologies for renewables deployment.

34. **Planning with Renewables.** The full assessment of the economic potential of renewable energy requires that technologies are viewed as an integral element in analysing the relationship of renewable and non-renewable technologies, transmission and distribution, employment effects, carbon emissions and international trade. Furthermore, current approaches to energy planning often underestimate the broader contribution of renewables and do not account for recent technology innovations and significant cost reductions over time. IRENA will work with countries and regions to help reflect the real potential of renewable energy technologies in long-term regional and national energy master plans. IRENA will also help enhance the quality of power sector

planning through the improved representation of renewables in existing planning tools and by highlighting renewable energy integration challenges and opportunities, based on IRENA's in-house expertise and unique data generated from primary sources. IRENA will contribute also to international planning model-based studies, such as the International Energy Agency (IEA), Energy Modeling Forum (EMF), International Energy Workshop (IEW) and Intergovernmental Panel on Climate Change (IPCC), as well as regional and national planning studies, and help translate the insights into policy-relevant information for Members. Planning with Renewables programmatic work will be led by IITC.

Activities: IRENA will conduct a comprehensive assessment of current planning methodologies and analyse costs for RE integration into energy systems. IRENA will complement this work by facilitating regional exchanges on best practices in system planning and inform the development of long-term global and regional energy outlook by engaging with energy modelling stakeholders.

Impact: Renewable energy mainstreamed in energy planning, with a focus on the power sector.

35. **Renewables Readiness Assessment and Advisory Services.** IRENA's Renewables Readiness Assessment (RRA) is a country-driven process for assessing key policies, potentials and technologies for renewable energy deployment and the actions necessary to create an enabling policy and decision-making framework. The experience gained in 18 countries in the course of three years has enabled IRENA to refine the RRA methodology and gain significant insights on how the process can be further refined to assist countries. Working with national experts has also allowed IRENA to create a network of regional expertise which, in the future, would be able and willing to support countries undertaking RRA. IRENA will continue to support countries in RRA, with a greater use of regional pools of experts to broaden and enhance this process. To help advance post-RRA action and provide targeted support upon request, IRENA will offer Advisory Services for needs-based technical assistance, capacity building, and best practice, experience and knowledge sharing. Renewables Readiness Assessment and Advisory Services will be led by CSP with the support of IITC.

Activities: IRENA will facilitate RRAs and, with the support of IRENA's knowledge base and technical expertise, provide in depth, targeted technical advisory services upon request. Advisory services will focus on resource assessments, legal and regulatory frameworks, implementation of standards and quality assurance mechanisms, structuring public-private partnerships, and RE technology deployment frameworks such as small hydro development in Latin America, biomass co-generation, and solar and wind in Caribbean and Africa.

Impact: Countries equipped with knowledge and expertise to implement an enabling policy framework to upscale renewable energy deployment.

Planning for the global energy transition					
Objective	**Impact**	**Component**	**KPFC**	**IITC**	**CSP**
Mainstreaming renewable energy options and strategies in energy plans	Established platform for cooperation and concerted action by stakeholders to accelerate deployment of renewable energy	SE4ALL Renewables Hub	✓	✓	✓
	Comprehensive and acknowledged roadmap on options and action for doubling the share of renewable energy by 2030	REMAP2030	✓	✓	
	Increased awareness, partnerships and technical support to local governments on renewable energy options in cities	REpowering Cities	✓		✓
	Analytical and empirical framework for informed cross-sectoral policy and decision-making in resource-constrained environments	Water, Energy and Land Nexus	✓		✓
	Comprehensive knowledge, resources and guidelines for grid and storage technologies for renewables deployment	Transforming Power Grid Infrastructure		✓	
	Renewable energy mainstreamed in energy planning, with a focus on the power sector	Planning with Renewables		✓	
	Countries equipped with knowledge and expertise to implement an enabling policy framework to upscale renewable energy deployment	RRA and Advisory Services		✓	✓

Resource Requirements 2014-2015 (in USD thousands)[4]	**10,816**	Proportion of IRENA budget	**17%**

Staff costs	**(in USD thousands)**	**4,901**
Non-staff costs		**5,915**
Non-staff costs by component		
- SE4ALL RE Hub		604
- REMAP 2030		1,854
- Repowering Cities		296
- Nexus		174
- Transforming Power Grid Infrastructure		861
- Planning with RE		556
- RRA and Advisory Services		1,570

[4] Reflecting combined core budget and voluntary contributions from Germany and the United Arab Emirates.

II. Gateway to knowledge on renewable energy

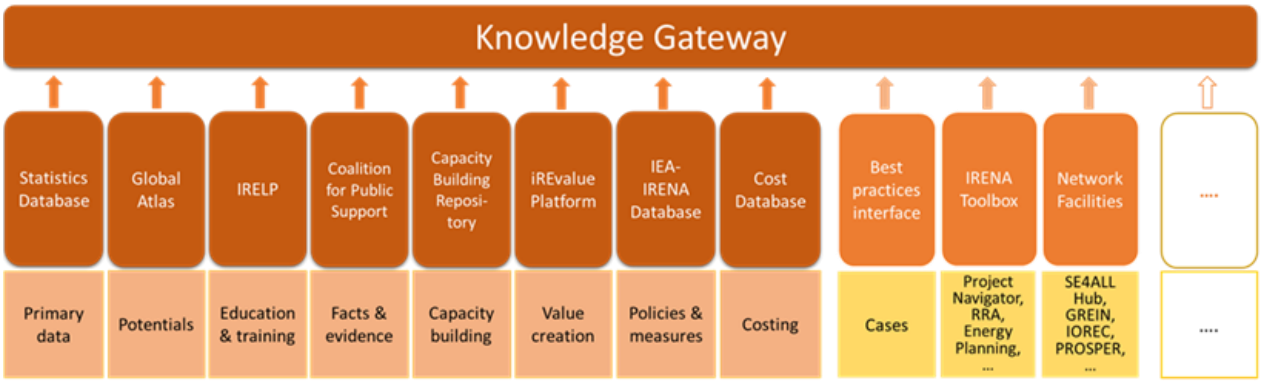
Objective: Renewable energy knowledge accessible to all

36. Every country around the world has some form of renewable energy within its energy mix. As renewable energy technology development advances, the share of renewables in the energy mix is rapidly increasing in many countries. Renewable electricity production increased by over 35% in the last five years and is expected to grow some 40% in the next five.[5] By 2016 renewable energy sources are expected to be generating more power globally than natural gas, and twice as much as nuclear.[6] This success story is however not yet widely recognised, as renewables are still an evolving field in which data and information are scattered, accuracy varies and reliable and neutral information is often unavailable.

37. Deployment of renewable energy technologies holds growing promise for the future, but for it to materialise, stakeholders need to have a thorough understanding of the state of play in markets, policies, financing, and technology options, including their costs and benefits. Development of renewable energy is tainted by misconceptions about its technologies and their impacts. Authoritative data and information, both quantitative and qualitative, are therefore a paramount need for both public and private sectors. They are also a foundation of good decision-making as global energy systems transition towards sustainability.

38. IRENA, with its unique mandate and near-universal membership, will further its efforts to become the centre of excellence for global renewable energy information with an integrated approach to data and information management. IRENA generates, but also collects from its partners and membership, different streams of data and information, such as renewable energy market statistics, resource potentials, information on education and career opportunities in the sector, and innovation and technology costs and benefits information, among others. To provide easy access to information and data sought after by users, IRENA will design a single online portal, the renewable energy Knowledge Gateway. The Gateway will be based on a state-of-the-art online platform which will contain knowledge categorised in a manner that allows the user to easily locate and extract information. The Gateway will also contain links to other IRENA products, including reports and publications, and serve as an entry point to its analytical work. Growing amounts of data, information and analysis available through the Knowledge Gateway will become an important global resource, and enable rapid access to information, satisfying specific needs of the Gateway's multiple users.

[5] Source: IEA.
[6] *Id.*



39. IRENA will continue to expand its capacity for the systematic collection, harmonisation and dissemination of relevant data and information. This will be accomplished by forming targeted and inclusive partnerships to gain access to primary data sources as well as further systematising secondary source data to enrich the Knowledge Gateway as a tool for IRENA's role as the authoritative global voice for renewable energy information. Knowledge Gateway tool development will be led by KPFC.

Activities: IRENA will design the Knowledge Gateway platform structure, integrate additional data and information from IRENA projects and launch the Knowledge Gateway platform.

Impact: Authoritative, freely accessible global knowledge on renewable energy.

40. **REthinking Energy.** The annual publication "REthinking Energy" will be an important instrument to fulfil the Agency's advocacy and policy advisory role as a global voice for renewable energy. Its goal is to disseminate accurate and unbiased knowledge and assessments of the progress of renewable energy deployment and provide forward-looking analyses to inform policy-makers and stimulate discussions on key issues and emerging trends in renewable energy policy, markets, finance, technology and innovation. It lays out short- to medium-term pathways for a faster and wider deployment of renewable energy solutions through the identification of major investment and impact opportunities, both from a technology and regional perspective. As IRENA's overarching publication, it also provides an opportunity to showcase and articulate the Agency's work and knowledge products. Release of the Rethinking Energy publication will be led by KPFC.

Activities: IRENA will identify themes, research and produce two editions of the annual REthinking Energy publication utilising an inclusive consultative process with key stakeholders.

Impact: Informed global debate on the transformative potential of renewable energy technologies to address rising global energy challenges.

41. **Renewables Statistics**. Solid data is the foundation of all analytical work. IRENA will continue its efforts to build the most complete, up-to-date and freely accessible global renewable energy statistics database available. It will collect, harmonise and systematise basic renewable energy statistics from primary sources in partnership with countries, and build upon the work of other organisations engaged in renewable energy statistics including the International Energy Agency (IEA) and the United Nations Statistics Division (UNSD). Data collection will be complemented with data from industry associations and other relevant secondary sources. IRENA's network of data focal points will be expanded to include regional entities active in renewable energy data collection and reporting, in order to build on international partnerships and avoid duplication and unnecessary burdens on Members. In cooperation with relevant entities, IRENA will identify appropriate accounting and estimating methods for renewable energy data on such issues as bioenergy and distributed installations. Renewables Statistics activities will be led by KPFC.

Activities: IRENA will collect and standardise renewable energy data from countries and secondary sources improving RE data accounting methodologies.

Impact: Solid foundations established for the most complete, up-to-date and freely accessible global renewable energy statistics database with high quality data.

42. **The Global Atlas.** The Global Atlas is the largest global database with free access to the most comprehensive information on renewable energy resource potentials**.** It is a unique partnership framework that, at present, includes 39 countries and 50 international partners, including DLR (Germany), CENER (Spain), Masdar Institute (UAE), Mines ParisTech (France), and NREL (United States), among others.[7] The Global Atlas has developed into a powerful platform, but is also building a strong consortium from which technical support can be leveraged for countries in need. Building on the initial data of solar and wind energy, the Atlas is progressively growing to

[7] For additional organisations, please see Annex III.

encompass all other renewable energy sources, i.e. bioenergy, geothermal, hydropower, and ocean. The initiative will continue to develop the tools to translate raw information on physical potential to useful information for policy-makers such as technical and economic potential. This will be achieved by integrating information from other projects and databases, such as IRENA's work on costing. In the coming years, the Atlas partnership framework will be also used to link the technical expertise and financial resources to perform local assessments, moving from policy relevance to the project level. The Global Atlas database development will be led by KPFC and supported by IITC.

Activities: IRENA will expand the coverage of the Global Atlas to encompass all six renewable energy sources (solar, wind, bioenergy, geothermal, hydropower, marine energy), facilitate resource measurement campaigns, assist in capacity building for energy planners and policy-makers on the use of spatial planning techniques for energy systems planning and policy making; and begin the integration of the Atlas and Costing work to create economic opportunities mapping tools.

Impact: Enhanced global awareness of renewable resource potentials and policy-makers enabled to make informed planning decisions.

43. **IRENA Renewable Energy Learning Partnership (IRELP).** Despite strong growth in the renewables jobs market with 5.7 million people working in the renewable energy sector today, there is a critical shortage of skilled personnel to develop, design, finance, build, operate and maintain renewable energy projects, representing one of the greatest barriers to the faster and broader uptake of renewable energy technologies. The development of IRELP as a unique global platform that includes a wide range of partners and provides free access to all renewable energy education information has become a major resource within this area. With active users all over the world and an online community of some 100,000 individuals, IRELP will continue to raise the profile of this sector as an attractive career option. In 2014-2015, IRELP will complement the current education and training opportunities database with information on job opportunities and career guidance. IRELP will also develop an online discussion forum to bring together stakeholders from industry, academia and government to share lessons and best practice in the development of renewable energy curricula to support long-term sustainable development-focused education strategies. IRELP development will be led by KPFC.

Activities: In cooperation with partners, IRENA will increase access to, and awareness of, renewable energy education and training through continuous expansion of the database, creation of a renewables career centre, and the establishment of an online forum to facilitate the development of renewable energy curricula by stakeholders and the expansion of the renewable energy career centre.

Impact: Freely accessible renewable energy education and training database enriched with career opportunities and guidance, and best practices for long-term education strategies.

44. **RE Policy and Best Practice: Status and Trends**. Governments and stakeholders in the renewable energy sector need to remain abreast of the latest information and developments on policy and regulatory design, as well as best practice, in particular in times of changing market conditions. To provide access to the most comprehensive and pertinent information and knowledge, IRENA is partnering with leading organisations and institutions. The IEA/IRENA Policies & Measures Database provides an overview of global renewable energy policy development, as well as country-specific policy profiles, helping to address increasing demand from policy-makers, researchers and the general public for accurate, timely, easily accessible information on renewable energy policies and measures. At present, it contains over 1,500 entries from 106 countries and IRENA, together with IEA, will continue to expand this database. IRENA will also accelerate its efforts to acquire information on renewable energy policies, regulations and best practice from its membership as well as forge partnerships with other leading institutions to further improve the coverage. This will include collaborative arrangements with the World Bank/ESMAP, the Clean Energy Solutions Center, and RES and PV LEGAL. The RE Policy and Best Practice: Status and Trends global repository will be led by KPFC.

Activities: IRENA, in cooperation with partners, will conduct an analysis of policy status and trends based on standardised information on renewable energy policies and measures from Members, and systematise information on best practice and case studies on renewable energy deployment.

Impact: Global repository of renewable energy policies, regulations and best practice.

45. **Renewables: The True Costs.** IRENA's cost analysis of 8,000 real world renewable energy projects undertaken in 2013 provides the most current and comprehensive global cost analysis to date. It shows that dramatic recent and projected falls in the cost of renewable energy are making it competitive with fossil fuels in countries across the world, and that it has become the least cost option in a growing number of markets and applications. IRENA's analysis is filling an important information gap in the renewable energy debate and has begun to dispel the outdated perception that renewable energy always comes at a high cost. This authoritative information is crucial to national, regional and international actors in the field, including governments, industry, businesses and consumers. It also allows IRENA to communicate powerful messages about the improving competiveness of renewables. In the coming years, the costing work will expand to address topical

and timely issues, such as solar PV parity and new and emerging markets, off-grid and mini-grid technology system integration costs, and to provide clear recommendations to policy-makers on deployment and cost reduction potentials. To build on the work to date, IRENA will launch its Renewable Costing Alliance, the central global network for cost data and analysis, and quarterly PV Parity Indicators. The IRENA Renewable Costing Alliance will bring together industry, business, research organisations, utilities and others who can contribute real project data, to establish the most comprehensive database of renewable technology costs and performance available. Based on this information, IRENA will be able to conduct forward looking analysis of cost issues with unique global insights and recommendations for policy-makers. Costing work will be led by IITC.

Activities: IRENA will expand the IRENA Renewable Cost Database with the establishment of the Renewable Costing Alliance making it the most comprehensive resource on renewable energy costing. This data will support the development of additional costing reports to cover different energy sectors and uses and, in particular, an up-to-date analysis of, and recommendations on the improved cost competitiveness of solar PV compared to local retail electricity prices and in off-grid and mini-grid technology systems.

Impact: Authoritative and comprehensive information and analysis of the true cost competitiveness of renewables globally to help shape national and global debates, and global analysis of real cost issues and clear policy recommendations and tools to accelerate renewables deployment.

46. **Global Investment Dynamics.** Renewables have attracted over one trillion dollars in investments to date and in an investment climate that is continuously changing. To better understand relevant trends, IRENA has mapped financial flows from multi- or bilateral public and private sources. In the course of this work, important data gaps have become evident. Among the critical information gaps, current databases often do not include small-scale renewable energy investment information at all. As the global shift towards decentralised energy accelerates, the understanding of such investments is becoming increasingly important. IRENA will work to address these gaps, with added information on renewable energy investments, cost of capital, types of investments, and commercially viable business models to encourage scaled-up and more rapid action on the ground. IRENA's regional and country-based activities will help establish the necessary arrangements for data collection and highlight fund and investor synergies. Global investment dynamics programmatic activities will be led by KPFC.

Activities: IRENA will complement information on renewable energy investment by developing standardised data on gaps identified, including small-scale renewable

energy applications and a mapping of sources of possible financing for project developers.

Impact: Solid global resource of renewable energy investment information and financial flows, accessible to all, showcasing global investment dynamics and potential sources of financing.

47. **Coalition for Action on Public Support to Renewable Energy**. There has never been a more important time to invest in renewable energy, yet myths about renewable energy technologies have penetrated public opinion and are influencing the political landscape around the world. At the third IRENA Assembly, the Ministers called upon IRENA to tackle some of the persistent myths, such as those concerning the reliability and costs of renewables. IRENA convened a wide range of renewable energy stakeholders to discuss this important knowledge and communication gap, and proposed to form a multi-stakeholder global coalition for a concerted and innovative effort to develop clear messaging to improve social acceptance of renewable energy. Using this important stakeholder platform, IRENA will accelerate the efforts to devise and disseminate unified and targeted messaging to support business cases of renewable energy and influence public opinion with neutral and reliable data and information. Coalition for Action on Public Support to Renewable Energy activities will be led by KPFC.

Activities: IRENA will operationalise the Coalition for Action on Public Support to gather and effectively disseminate renewable energy facts and analysis in collaboration with major RE advocates in industry and civil society.

Impact: Global coalition effectively disseminating authoritative, consistent, and unified messages on renewable energy.

Gateway to knowledge on renewable energy					
Objective	**Impact**	**Component**	**KPFC**	**IITC**	**CSP**
Renewable energy knowledge accessible to all	Informed global debate on the transformative potential of renewable energy technologies to address rising global energy challenges	REthinking Energy	✓		
	Solid foundations established for the most complete, up-to-date and freely accessible global renewable energy statistics database with high quality data	Renewables Statistics	✓		
	Enhanced global awareness of renewable resource potentials and policy-makers enabled to make informed planning decisions	The Global Atlas	✓	✓	
	Freely accessible renewable energy education and training database enriched with career opportunities and guidance, and best practices for long-term education strategies	IRELP	✓		
	Global reference repository of renewable energy policies, regulations and best practice	RE Policy and Best Practice	✓		
	Authoritative and comprehensive information and analysis of the true cost competitiveness of renewables globally to help shape national and global debates, and global analysis of real cost issues and clear policy recommendations and tools to accelerate renewables deployment	Renewables: The True Costs		✓	
	Solid global resource of renewable energy investment information and financial flows, accessible to all, showcasing global investment dynamics and potential sources of financing	Global Investment Dynamics	✓		
	Global coalition effectively disseminating authoritative, consistent, and unified messages on renewable energy	Coalition for Action on Public Support	✓		

Resource Requirements 2014-2015 (in USD thousands)[8]	**7,624**	Proportion of IRENA budget	**12%**

Staff costs	**(in USD thousands)**	**2,910**
Non-staff costs		**4,714**
Non-staff costs by component		
- Knowledge Gateway		605
- REthinking Energy		606
- Renewables statistics		465
- The Global Atlas		1,090
- IRELP		599
- Renewables: The True Costs		813
- Global investment dynamics		30
- Policies and Best Practice		123
- Coalition for Action on Public Support		383

[8] Reflecting combined core budget and voluntary contributions from Germany and the United Arab Emirates.

III. Enabling investment and growth

Objective: Improving policy frameworks and enabling market conditions for accelerated deployment of renewable energy

48. The adoption of enabling policy frameworks at national and regional levels has been a driving force in the global transition towards more reliable and sustainable energy systems. Building the business case for renewables at the national and regional level requires a better understanding of macro-economic, social and environmental aspects. IRENA's work to date has begun to showcase the benefits of renewable energy in multiple settings, and highlights the potential for job creation, industrial value-added, environmental sustainability and income generation. One example in the area of jobs is IRENA's annual global assessment of employment status and trends in 2012, which shows a total of 5.7 million jobs in the renewable energy sector.

49. As the business case for renewables improves, the dynamics of market conditions are evolving and require timely and adequate adaptation of renewable energy market policies. IRENA has analysed a number of different energy markets and provided recommendations to policy-makers on how to devise instruments that best enable renewable energy deployment. It will continue to provide up-to-date analysis of enabling policy frameworks, spanning the renewable energy deployment cycle, including best practices and trends in policy design, evaluation of support mechanisms and their adaptation within dynamic market conditions. The outcomes will provide critical insights of renewable energy markets for relevant stakeholders, including the private sector and financing institutions, as well as on emerging regional opportunities, such as market transformation and integration.

50. To bridge the knowledge gap concerning the direct and indirect benefits of renewables, IRENA created the ireValue platform in cooperation with a range of partners. Government representatives, academic and research institutions and field experts are contributing to IRENA's efforts through in-depth research, dissemination and dialogue. Knowledge of the multiple potential socio-economic benefits of renewable energy provides an important perspective on renewable energy to put deployment costs in a broader perspective. In this context, ireValue is becoming a point of reference for policy-makers and stakeholders to understand how value creation can be realised, and to support the business case for renewables.

51. From a financial perspective, renewable energy projects are unique in that they usually involve relatively high up-front capital expenditure and modest to low operational expenditures. The real or perceived risk, the relatively short track record of many renewable energy technologies and the limited experience of project developers all act as barriers to access affordable capital for projects. In an effort to enhance investors' interest in renewable energy technologies in all regions, IRENA will analyse the necessary conditions to access financing to identify renewable energy investment barriers, as well as to formulate mechanisms to mitigate risks. IRENA will also facilitate dialogue between policy-makers, project developers and financial institutions to leverage capital and to increase investors' confidence in renewable energy projects.

52. **Policy assessment.** The energy transition is poised to have an impact on the structure of the energy sector in many countries. Falling costs and the modular nature of renewable energy are fuelling trends that increasingly depict a more diverse ownership structure of renewable energy power generation, with a rise in private ownership of renewable energy assets. The evolving ownership structures present a challenge for accommodating a growing share of renewable energy, often requiring effective policy and regulatory frameworks that will adapt to the changing environment. IRENA will focus on the impact of evolving ownership structures in the energy sector and in designing policies to support renewable energy deployment. To stimulate the global debate on policy issues of great pertinence to a variety of stakeholders, IRENA will convene the Policy Day on an annual basis. Policy assessment activities will be led by KPFC.

Activities: IRENA will continue to assess the key challenges faced by policy-makers in adapting to the structural changes in the energy sector, specifically focusing on the changing ownership structures. IRENA will analyse best practices, gather lessons learned from diverse country experiences in adopting effective and efficient measures to address these challenge, and provide recommendations to policy-makers.

Impact: Contribution to the global debate and increased awareness of policy options in a dynamic energy market.

53. **Regional Market Analysis.** The wealth of knowledge embedded in diverse regional markets needs to be captured, analysed and disseminated to share experiences and highlight transferable practices. As such, periodic assessments of energy markets are necessary to identify the existing status and trends of renewable energy deployment and the evolving policies to support them. Based on the examination of the energy sectors from a regulatory, administrative, institutional and financial perspective, IRENA will conduct analyses in the Latin America and Caribbean (LAC) and Gulf Cooperation Council (GCC) regions. Regional market analysis assessments will be led by KPFC.

Activities: IRENA will conduct an analysis of regional markets for the deployment of renewables in two regions. In the LAC, IRENA will identify best practices and formulate recommendations based on the innovative approaches to RE deployment adopted by several countries in the region. In the GCC, IRENA will conduct a market assessment and provide best practices on policy, regulatory and administrative frameworks that can facilitate the transition to clean energy systems of economies characterised by rapid industrialisation, population growth and water scarcity.

Impact: Enhanced global knowledge of policy options for opening energy markets to renewable energy investment.

54. **ireValue: Social, Economic and Environmental Impacts.** Employment remains one of the critical objectives for countries' growth strategies. As deployment of renewable energy increases, understanding the ways to maximise its impact on job creation is becoming increasingly important. The first ever International Renewable Energy Jobs Conference will take place in January 2014, a pinnacle of IRENA's work to date on the global dynamics of renewable energy employment. Employment generation will remain an important part of IRENA's work in the coming years, with a particular focus on energy access and gender. As part of the ireValue, the scope of IRENA's current socio-economic activities will be broadened to include different technologies, such as off-grid applications, and selected impacts, such as income, trade balance, energy and security, and environmental impacts. IRENA, during 2013, gained an overview of potential environmental impacts from each technology and identified "hot spots" that warrant particular attention. IRENA will expand its analysis of potential environmental impacts of different renewable energy technologies in identified hot spots. It will also look into regional specifics and draw lessons from good practices to avoid or mitigate potential impacts and disseminate knowledge and experiences through regional engagement. ireValue programmatic work will be led by KPFC.

Activities: IRENA will develop the knowledge framework on the socio-economic impact (income, trade balance, energy security) of renewable energy deployment for solar, wind and off-grid applications. Together with its partners, IRENA will carry out studies that analyse experiences and best practices from different countries and regions. It will focus on the adoption of policies that maximise value creation and the dissemination of existing tools that allow policy-makers to empirically assess selected socio-economic impacts of renewable energy deployment. Environmental impacts of deployment will also be studied such as the analysis of policies for end of life treatment of PV modules within a multi-stakeholder consultative process.

Impact: Unique knowledge platform on socio-economic and environmental impacts empowers policy-makers and increases public awareness with relevant analysis and information.

55. **Energy Pricing.** Pricing structures that reflect the true cost of energy are an important factor for creating economic incentives for renewable energy investment and encouraging private sector engagement. In 2013, IRENA has begun examining energy pricing frameworks to gain insights on the design of tariff setting and reforms. IRENA will build upon this work by studying specific market conditions, including different energy pricing structures and policies, starting with the MENA countries. Energy pricing studies will be led by KPFC.

Activities: IRENA will analyse energy pricing frameworks under specific market conditions with the objective of developing recommendation for economically, socially

and environmentally optimal pricing that enables renewables technologies to be effectively integrated in decision-making.

Impact: Increasing investment in renewable energy by developing guidelines and approaches to optimal energy pricing frameworks and reforms required in current policies.

56. **RE Finance.** Growth in renewable energy around the world in the past decade attests to the dynamic investment flows currently being seen. However, the global ambition for the deployment of renewable energy requires mobilising concomitant investment levels. To meet this ambition, the real and perceived risks inflating the cost of financing have to be addressed. IRENA will systematically engage financial institutions and the private sector to explore innovative risk mitigation frameworks and blend finance to facilitate the design of instruments, such as multilateral risk mitigation mechanisms, to attract investors. In addition, in 2013 IRENA developed the Project Navigator, a tool to assist developers' access financing for bankable projects. In 2014-2015, the Project Navigator will be deployed, in consultation and collaboration with countries, financial and donor organisations, and project developers. During the biennium, the tool will also be expanded to include additional technologies and will be adapted to specific regional contexts. IRENA will assist countries in the use of this tool. RE finance engagement will be led by KPFC with the support of IITC.

Activities: IRENA will analyse and evaluate risk and risk mitigation instruments in renewable energy investment and develop technology- and region-specific modules for the IRENA project development tool, the "Project Navigator". This work, in addition to the completion of seven pilot studies, will further validate and refine the Project Navigator tool.

Impact: Enhanced understanding of risks and innovative mitigation options and tools to develop bankable projects to facilitate renewable energy investment.

57. **Cooperation with the Abu Dhabi Fund for Development.** Mobilising finance is a key challenge in securing increased renewable energy deployment. With this in mind, IRENA is cooperating with the Abu Dhabi Fund for Development (ADFD) in facilitating renewable energy projects in developing countries. ADFD provides concessional loans of up to USD 350 million through the IRENA/ADFD project facility, for a maximum of seven cycles. The project facility focuses on innovative projects that enhance learning and which may be easily replicated. The implementation of the second and third cycle will take place in 2014 and 2015. IRENA will continue to work on facilitating access to financing, which will include dialogue with potential

donors to expand the current project facility. KPFC will lead IRENA's cooperation with the Abu Dhabi Fund for Development.

Activities: IRENA will support the implementation of two project cycles of the IRENA/ADFD project facility.

Impact: Investments in projects with replicable and/or innovative business models that promote energy access in developing countries.

58. **Quality Assurance and Standardisation.** Quality assurance and standardisation are cornerstones of ensuring confidence in long-term products and services, as well as safety and environmental performance. As a result, standards are a critical element in lowering trade barriers and mitigating technology risks in order to enhance market conditions for deployment of renewables. In 2013, IRENA identified key needs and gaps for the standardisation of renewable energy technologies along the value chain. In 2014-2015, IRENA will build on this work to advise policy-makers on how to implement standards and quality assurance mechanisms, both at the national and regional level. It will provide the knowledge platform for state-of-the-art information on standards and patents. In collaboration with technical institutions, IRENA will promote the development of competency standards for training and certification of installers in selected technologies. Quality assurance and standardisation activities will be led by IITC with the support of CSP.

Activities: IRENA will support regional initiatives to operationalise standards and quality assurance mechanisms, tailored to the needs of IRENA Members through technical advice, the development of best practices and recommendations on quality assurance for selected RE technologies, and the implementation of a Standards and Patents information platform. IRENA will complement these activities by assisting countries in adopting and implementing certification of renewable energy technology installers through national and regional technical institutes.

Impact: Higher investor confidence though development of authoritative information and advice on standards and quality assurance.

59. **Innovation and Research, Development and Demonstration (RD&D).** Innovation results from a mix of human ingenuity, private sector initiatives, knowledge, networks of financial resources, sound management, and good timing. Given these qualities, innovation remains a policy goal that cannot be enforced or enacted, but rather must be enabled and encouraged. In 2013,

IRENA developed a methodology for policy-makers to help define appropriate national, regional and international strategies and establish cooperative frameworks that spur innovation in renewable energy technologies. It also assessed the possibilities for regional cooperation on RD&D, and analysed future technology market trends. IRENA's analysis of the LAC region has shown that RD&D and regional cooperation can bring significant benefits. IRENA will explore such possibilities in other regions, including Africa and Central Asia, to stimulate cooperation and strengthen RD&D efforts. IRENA will also work to develop and support the networking of national technology centres, to facilitate knowledge transfer and the sharing of best practices, and identify opportunities for streamlining the efforts of existing technology centres and national RD&D programmes. In addition, it will continue to analyse developments in future technologies, including advanced biofuels, electricity storage, and production and use of biogas. RD&D initiatives will be led by IITC.

Activities: IRENA will analyse the policy framework for optimal technology deployment and provide advice on optimal frameworks for a successful diffusion of modern renewable energy technologies in developing countries. In addition, the Agency will map and analyse the gaps and benefits of collaborative RD&D on RE technologies and RD&D planning in regions, and conduct an analysis of future RE technologies and their potential for deployment in markets to match new and increasing energy needs with innovative and cost-effective RE solutions.

Impact: Enhanced innovation through international cooperation and streamlined national RD&D plans.

Enabling investment and growth					
Objective	**Impact**	**Component**	**KPFC**	**IITC**	**CSP**
Improving policy frameworks and enabling market conditions for accelerated deployment of renewable energy	Contribution to the global debate and increased awareness of policy options in a dynamic energy market	Policy assessment	✓		
	Enhanced global knowledge of policy options for opening energy markets to renewable energy investment	Regional Market Analysis	✓		
	Unique knowledge platform on socio-economic and environmental impacts empowers policy-makers and increases public awareness with relevant analysis and information	ireValue: Social, Economic and Environmental Impacts	✓		
	Increasing investment in renewable energy by developing guidelines and approaches to optimal energy pricing frameworks and reforms required in current policies	Energy Pricing	✓		
	Enhanced understanding of risks and innovative mitigation options and tools to develop bankable projects to facilitate renewable energy investment	RE Finance	✓	✓	
	Investments in projects with replicable and/or innovative business models that promote energy access in developing countries	Cooperation with the Abu Dhabi Fund for Development	✓		
	Higher investor confidence through development of authoritative information and advice on standards and quality assurance	Quality assurance and standardisation		✓	✓
	Enhanced innovation through international cooperation and streamlined national RD&D plans	Innovation and Research, Development and Demonstration (RD&D)		✓	

Resource Requirements 2014-2015 (in USD thousands)[9]	**8,252**	Proportion of IRENA budget	**13%**

Staff costs	**(in USD thousands)**	**3,453**
Non-staff costs		**4,799**
Non-staff costs by component		
- Policy Assessment		280
- Regional Market Assessment		362
- Socio-economic & environmental impact (ireValue)		542
- Energy Pricing		335
- RE Finance		1,329
- Quality Assurance and Standardisation		737
- Innovation and RD&D		770
- Cooperation with the ADFD		444

[9] Reflecting combined core budget and voluntary contributions from Germany and the United Arab Emirates.

IV. Renewable energy access for sustainable livelihoods

Objective: Contributing to sustainable livelihoods through access to renewable energy

60. Achieving universal access to modern energy services is a vital pre-requisite to advancing socio-economic development. Renewable energy can have an immediate and transformative impact on the quality of life for millions of people who currently lack access to electricity. This is particularly true for rural areas where new business models have made renewable energy applications accessible and affordable, and triggered the imagination of local entrepreneurs in countless ways.

61. Unfettered political commitment to rural electrification, together with a clear institutional framework, are key to attracting private sector involvement. At the same time, access to affordable finance and providing smart incentives that de-risk private sector investments will promote sustainable business models. Broad support is required to accelerate the adoption and sustainable use of renewable energy, while also advancing the goals of the SE4ALL initiative. To catalyse efforts to scale-up off-grid renewable energy deployment, the International Off-grid Renewable Energy Conference (IOREC) was held in Accra, Ghana in 2012. IRENA co-organised this event with the ECOWAS Regional Centre for Renewable Energy and Energy Efficiency (ECREEE) and the Alliance for Rural Electrification (ARE) with the aim of bringing together stakeholders from the public and private sectors. IOREC concluded that crucial factors in accelerating the deployment of off-grid renewable energy are the adaptation of an effective policy and regulatory framework, tailored business and financing models and technologies suitable for the rural context. IOREC also stressed that local enterprise will be instrumental in extending electricity access, and hence needs to be fostered and supported.

62. IOREC convened over 350 participants involved in energy access efforts from 80 countries, including representatives from 30 rural electrification agencies. It positioned IRENA at the forefront of the global efforts to promote clean off-grid solutions. IOREC will become a regular biennial off-grid conference taking place in different regions, and will to be used as the platform for engagement with public institutions responsible for rural electrification, the private sector and practitioners.

63. **IOREC platform.** The IOREC platform promotes the dialogue between stakeholders across the rural energy value chain. Through the platform, IRENA will systematically engage public institutions responsible for rural electrification and practitioners, to identify key deployment barriers faced by off-grid renewable energy technologies and to collectively devise solutions to address them. IRENA's work on renewable energy technologies for rural applications will be integrated in the IOREC platform. In this context, the second International Off-Grid Renewable Energy Conference and Exhibition will be organised. The development of the IOREC platform will be led by KPFC.

Activities: IRENA will support enabling frameworks for off-grid renewable energy deployment through the IOREC platform through which it will engage key stakeholders and support action on the priorities identified in the 1st IOREC. IRENA will also host the second International Off-grid Renewable Energy Conference and Exhibition.

Impact: Scaling up off-grid renewable energy deployment by providing the platform for stakeholder engagement on a global level.

64. **Mini-Grids**. Mini-grids are central to achieving universal energy access by 2030. To meet this goal, it is estimated that mini-grids will have to provide over 40% of the additional generation necessary. To develop a compelling business case for a wide-spread mini-grid deployment, IRENA will address aspects of policy, regulatory, technology, finance and business model. In partnership with UNEP and the private sector, IRENA will also evaluate the potential of hybrid solutions for existing diesel-based mini-grids. IRENA will carry out capacity building efforts, for banks and entrepreneurs among others, in regions with the highest potential for renewable energy mini-grid installations to ensure the sustainability of the effort. Partnerships with well-established implementing and financing institutions, as well as the private sector, will be at the heart of IRENA's effort to accelerate mini-grid deployment. Mini-grids capacity building will be led by CSP and supported by KPFC.

Activities: The facilitation of a consultative process and development of an analytical framework to increase RE mini-grid deployment will be achieved by building a public-private partnership to promote hybrid mini-grids and by building a cross-cutting mini-grid initiative focusing on policy, regulatory, finance and business models in collaboration with well-established implementing and financing institutions, including the private sector..

Impact: Enabling conditions for renewable energy-based mini-grid deployment to shift the paradigm for universal energy access.

65. **Off-grid for Niche Applications.** Off-grid renewable energy technologies for productive applications can effectively contribute to social and economic development. They can improve agricultural productivity to contribute to food security, enhance rural healthcare facilities, and stimulate socio-economic development and quality of life in humanitarian settings, as well as in isolated communities. IRENA will partner with relevant organisations to devise deployment strategies and facilitate knowledge exchange on off-grid renewable energy technologies, not just in rural and remote settings but also in urban areas. Large commercial organisations that have regional or global presence, and can showcase renewable technologies either at the points of

consumer interface or in the back end of their operations will be identified with a view of policy advocacy and dialogue. Off grid for niche applications strategy development and knowledge exchange will be led by CSP.

Activities: IRENA will assist countries, upon request, in developing deployment strategies and facilitate knowledge exchange on off-grid renewable energy technologies in rural and remote settings. The Agency will also partner with private sector actors with regional or global presence to design and implement a plan to showcase renewable technologies for off-grid applications in urban and peri-urban areas.

Impact: Accelerated deployment of off-grid renewable energy solutions in isolated communities and urban areas.

66. **Capacity Building for Entrepreneurs.** Small and medium enterprises (SMEs) are engines for growth and prosperity for which renewable energy technologies are opening up a spectrum of new possibilities. SMEs will be a focus of IRENA's work in capacity building. IRENA will collaborate with existing business incubation centres and similar institutions to introduce and promote renewable energy solutions. It will facilitate knowledge exchange and skills transfer across regions, and provide advice and mentorship to SMEs with support from finance and enterprise development experts. This will also include strengthening financing institutions' capacity to assess and evaluate a range of renewables project proposals. The on-going initiative and example of IRENA's work in capacity building – Promoting a Sustainable Market for Photovoltaic Systems in the ECOWAS Region (ProSPER) – will continue with a focus on enterprise development and linkages with financial institutions. Capacity building for entrepreneurs initiatives will be led by CSP.

Activities: Capacity building activities are threefold. IRENA will support SMEs by creating expert groups providing guidance to RE entrepreneurs on identifying business opportunities. The Agency will support business incubation centres and facilitate sharing of experience across regions among similar institutions and it will build capacity of financing institutions to assess technology risks in developing countries.

Impact: Increased renewable energy deployment through greater financial and technical assistance to SMEs.

Renewable energy access for sustainable livelihoods					
Objective	**Impact**	**Component**	**KPFC**	**IITC**	**CSP**
Contributing to sustainable livelihoods through access to renewable energy	Scaling up off-grid renewable energy deployment by providing the platform for stakeholder engagement on a global level	IOREC platform	✓		
	Enabling conditions for renewable energy-based mini-grid deployment to shift the paradigm for universal energy access	Mini-grids	✓		✓
	Accelerated deployment of off-grid renewable energy solutions in isolated communities and urban areas	Off-grid for Niche Applications			✓
	Increased renewable energy deployment through greater financial and technical assistance to SMEs	Capacity Building for Entrepreneurs			✓

Resource Requirements 2014-2015 (in USD thousands)[10]	**3,393**	Proportion of IRENA budget	**5%**

Staff costs	**(in USD thousands)**	**1,699**
Non-staff costs		**1,694**
Non-staff costs by component		
- IOREC		545
- Mini-grids		586
- Off-grid Application		102
- Capacity Building for Entrepreneurs		461

[10] Reflecting combined core budget and voluntary contributions from Germany and the United Arab Emirates.

V. Islands: lighthouses for renewable energy deployment

Objective: Island energy systems transformed through renewable energy

67. Energy has long been and remains a major constraint to many islands' sustainable economic growth and development. Most islands around the world today are dependent on imported fossil fuels for the majority of their energy needs. For reasons of scale and isolation, energy infrastructure costs are higher, and the severe impact of oil price and supply volatility is exacerbated by the small size of local markets. Amongst most affected are the Small Island Developing States (SIDS). At the same time, the deployment of renewable energy technologies and efficient use of energy can have a transformational impact on SIDS energy security, employment generation, and economic and social well-being.

68. Some islands have become a lighthouse for the possibilities that renewable energy offers, by showing that their energy demands can indeed be satisfied to a large extent or entirely from indigenous renewable sources. By setting ambitious targets, islands are also promoting renewable energy as the means for climate change mitigation, as attested by the recent Majuro Declaration adopted by the Pacific Island Forum in September 2013. IRENA is supporting these efforts by taking concrete and practical action to help realise islands' potential to transition to a renewables-based energy future. These include the development of roadmaps to help harvest immense potential that rests in islands' abundant indigenous renewable energy sources, and undertaking grid stability studies to support the integration of high shares of renewables in the island grids.

69. IRENA's report on renewable energy roadmapping for islands identifies key concepts, challenges and best practices for the accelerated uptake of renewable energy in the Pacific islands and provides a framework for action. IRENA also undertook a comprehensive review of 15 Pacific islands, as well as a report detailing hybrid power systems for the Pacific. Together, they provide governments and all stakeholders active in the Pacific with baseline information to assist in the accelerated and coordinated deployment of local renewable energy. IRENA has also responded to the requests from islands to address their specific needs. It conducted an RRA in Kiribati to help devise an enabling framework for the deployment of renewables. IRENA piloted the grid stability study in Palau to help integrate a higher share renewables and, together with development partners, is developing a roadmap for Nauru.

70. At the Malta Global Island Conference in 2012, IRENA was called upon to establish a Global Renewable Energy Islands Network (GREIN) to provide a platform for pooling knowledge and exchange of ideas, sharing best practices and lessons learned, and seeking innovative solutions to accelerate the uptake of clean and cost-effective renewable energy technologies on islands. GREIN is a demand-driven initiative and, with IRENA's help, islands are shaping the Network to serve its intended purpose. Exchanges and information-sharing is spurring collaboration and a greater understanding of common problems and possible solutions. Even in its nascent stages, GREIN has proven to be a useful tool for targeted action in islands and for collaboration with countries that

wish to contribute – financially and otherwise – to advancing the deployment of renewables in islands.

71. IRENA's strong engagement with islands will continue, with SIDS as showcases for accelerated renewables deployment. The upcoming Third International SIDS Conference presents a unique opportunity to firmly embed renewable energy as the foundation of sustainable development in SIDS.

72. **GREIN.** In the coming years, GREIN will have six active interest clusters – on resource assessment, waste-to-energy, desalination, technology roadmaps, power grid integration and island tourism applications. IRENA will support the clusters through its analytical body of work, best practice workshops, and support for operating agents to establish and implement cluster work plans. IRENA will work in concert with other partners, including donors, international and regional organisations and other stakeholders to ensure the complementarity of efforts. GREIN will remain a flexible structure that is responsive to the islands' needs and requests. GREIN will be led by CSP and supported by IITC.

Activities: IRENA will establish and support six GREIN clusters. Through GREIN, IRENA will assist islands in the development of their roadmaps and resource assessment strategies, and analyse islands' grid stability for the integration of a higher share of renewable energy. GREIN activities will also demonstrate the business case for waste-to-energy and desalination systems and for investments in renewable energy in the tourism sector.

Impact: Improved knowledge of solutions and conditions for investment in renewable energy applications on islands.

73. **Partnerships for Action in SIDS**. The year 2014 was designated as the first International Year of SIDS by the United Nations General Assembly and will mark a renewed focus on their special case with Samoa hosting the Third International Conference on Small Island Developing States in September 2014. In preparation for the Conference, the General Assembly of the United Nations called for the "strengthening of collaborative partnerships between SIDS and the international community" as one of the important ways and means to address new and emerging challenges and opportunities for the sustainable development of SIDS.[11] Samoa subsequently shared its vision for a Conference that features partnerships prominently and serves as a launching pad for new and renewed partnership initiatives with concrete deliverables. IRENA will build upon

[11] UN Resolution A/RES/67/207

its already strong engagement with SIDS to support the Conference and the international efforts in this context and beyond. Action in SIDS partnership will be led by IITC.

Activities: IRENA will participate in the preparation for the Third International Conference on Small Island Developing States in Samoa. As a contribution to the Conference, IRENA will partner with public and private sector institutions to showcase opportunities for RE deployment on islands. The work in SIDS will continue based on the priorities identified by the Conference.

Impact: Strengthened partnerships to advance renewable energy deployment in SIDS.

74. **Building Capacity in Islands.** IRENA will continue to implement targeted capacity building initiatives in islands to advance the deployment of renewable energy. Like in many other settings, the development of the SME sector is crucial for island economies. For example, Caribbean Community (CARICOM) estimates that SMEs account for more than 70% of jobs in the region. At the same time, one of the main challenges SMEs are facing is the high electricity costs, which can account for 25% of a business's expenses. Renewable energy markets carry immense opportunities for SMEs. Yet most SMEs do not possess the know-how or tools to overcome the barriers and seize the opportunities. IRENA will focus on the capacity needs of SMEs to seize the opportunities renewable energy technologies present, and facilitate the exchange of experience and best practice of entrepreneurs. In addition, building upon the work in the Pacific, capacity building efforts will focus on policy and regulatory framework design and implementation, financing, and local technical capacities to design, install and maintain renewable energy projects. Capacity building in islands will be led by CSP.

Activities: IRENA will implement on-going IRENA capacity building initiatives in Pacific SIDS, assist island states to create a pool of certified technicians and provide targeted technical assistance to SMEs in the Caribbean to deploy renewable energy technologies.

Impact: Improved capacities to meet national renewable energy targets and attract investments in SIDS.

Islands: lighthouses for renewable energy deployment					
Objective	**Impact**	**Component**	**KPFC**	**IITC**	**CSP**
Island energy systems transformed through renewable energy	Improved knowledge of solutions and conditions for investment in renewable energy applications on islands	GREIN		✓	✓
	Strengthened partnerships to advance renewable energy deployment in SIDS	Partnerships for Action in SIDS		✓	
	Improved capacities to meet national renewable energy targets and attract investments in SIDS	Building Capacity in Islands			✓

Resource Requirements 2014-2015 (in USD thousands)[12]	**2,972**	Proportion of IRENA budget	**5%**

Staff costs	**(in USD thousands)**	**1,499**
Non-staff costs		**1,473**
Non-staff costs by component		
- GREIN		700
- Partnership for Action in SIDS		248
- Building Capacity in Islands		525

[12] Reflecting combined core budget and voluntary contributions from Germany and the United Arab Emirates.

VI. Regional action agenda

Objective: Regional integration with increased shares of renewables to meet energy needs

75. As economies grow and develop, demand for electricity increases, and renewable power technologies are well positioned to meet these needs. Global demand for electricity is expected to double by 2040 with the bulk of growth in developing and emerging economies. IRENA's Global Atlas reveals the vast renewable resource potential that can be harnessed, and the IRENA costing data shows that many renewables can often compete with fossil-fuelled generation on a commercial basis. IRENA's socio-economic studies also attest that there are clear opportunities for added benefits along the renewables value-chain. Thus a compelling economic and business case now exists for developing reliable, indigenous renewable energy resources.

76. But the opportunity that renewable power provides is yet to be realised. IRENA's work on the Africa Clean Energy Corridor has shown that many countries are in a position to benefit from the integrated resource planning, market integration and more open markets. Renewable power options must be fully considered in light of their declining costs, energy security, and environmental and socio-economic benefits. Major cost savings could also be achieved through regional planning processes that systematically consider cost effective renewable power options. Yet renewable power sources often face institutional barriers to market entry such as onerous requirements for grid connection. They also have higher costs of capital than other power sources owing to real and perceived risks about technology performance, energy outputs and expected revenues.

77. IRENA will support countries and regions to implement a comprehensive set of actions towards enabling higher shares of renewables and further development of regional grids. Key components will be an assessment of the long-term plans in place, the extent to which these plans incorporate definitive assessments of potential cost-effective renewable options, the opportunity to incorporate a greater share of renewables in light of technology advancements, declining cost trends, and the capacity to operate transmission grids with a greater share of renewable power. RRAs have shown that human, financial, and institutional barriers often prevent the expansion of renewable power options in countries. Regional initiatives will require an assessment of these capacities and measures to address the gaps. IRENA will use its convening power to catalyse action by regional stakeholders to accelerate the introduction of renewable power options at the regional level, drawing upon the knowledge and experience of electric utilities, transmission companies, independent power producers, regulators, power pools, regional political and economic bodies, multilateral financial institutions and development partners.

78. To take full advantage of renewable power options and to ensure that they are objectively compared with competing options, IRENA will help countries exchange best practices on effective planning at both country and regional levels. IRENA will also work with governments, private investors and financial institutions to develop enabling frameworks that mitigate risks and reduce the cost of capital for renewable power investments. Furthermore, IRENA will forge skill and

knowledge networks to build capacity for deployment of different renewable resources in different regions.

79. **Africa Clean Energy Corridor.** Africa is undergoing a transformation. By 2050, it will be home to 2 billion people, 40 percent in rural areas and 60 percent in cities. Africa's rapidly growing and diversifying economies will require massive investments in energy. The Africa Clean Energy Corridor seeks to develop an interconnected energy system that builds upon the Program for Infrastructure Development in Africa (PIDA). An action agenda for Eastern and Southern African Power Pool countries was formulated in close consultation with regional stakeholders at an Executive Strategy Workshop in June 2013, to be presented to ministers at the IRENA Assembly of January 2014. IRENA will support countries, in response to the needs that emerged from the strategy workshop, on country and regional planning processes for renewable power options, in order to unlock potential cost savings. IRENA will work with countries to identify potential renewable power development zones which would cluster generating capacity to facilitate the cost-effective transmission of power to load centres. Further, stakeholders have also asked IRENA to support the adoption of enabling financing and regulatory frameworks to allow renewable energy to compete on a level playing field. IRENA's capacity building initiatives will support policy-makers, utilities and grid operators in their efforts to transition towards increasing shares of renewable energy in the regional energy mix. Together, improved planning processes, renewable power development zones, enabled financing and regulatory frameworks, and improved policies and capacities for renewable energy deployment will lead to an invigorated economic climate and job creation. The Africa Clean Energy Corridor initiative will be led by CSP with support provided by KPFC and IITC.

Activities: IRENA will implement an action agenda, formulated in close consultation with regional and national stakeholders. It will support country and regional planning processes, identify potential renewable power development zones and forge regional consensus on long-term needs for new generation and transmission capacity needed to harness renewable energy. Assistance will be provided in cooperation with regional entities to develop enabling regulatory frameworks and contribute to the capacity building of policy-makers, utilities, grid operators to incorporate increased shares of variable renewable power. Finally, IRENA will assess financial models and mechanisms to lower the cost of capital within Africa Clean Energy Corridor countries.

Impact: Growing renewable power deployment and investment strengthen economic growth, job creation and energy access.

80. **Central America Clean Energy Corridor**. With 46 million people and an economic growth of 5 percent per annum, Central America has rapidly growing energy needs. Although over 60

percent of the region's electricity comes from renewable energy sources, there is still a significant dependency on fossil fuels, derived largely from imports. In 2013, IRENA Member countries from Central America requested the Agency to search for opportunities to work with the Central America Integration System (SICA) and with the Central American Electrical Interconnection System (SIEPAC) initiative to explore possibilities to expand renewable power flows. IRENA is planning to launch the Central America Clean Energy Corridor at its Assembly in 2014 and then convene stakeholders such as government ministries, planners, regulators, power pools, utilities, independent power producers and equipment suppliers to agree on a set of key actions to advance the integration of renewables into the regional grid and strengthen regulatory, institutional, and transmission infrastructure and human capacity. IRENA will also consider options for the development of mechanisms to increase investor confidence in regional renewable energy projects. IRENA will facilitate the transfer of knowledge and skills to assist power pools, utilities and regulators in planning and operating grids with increasing shares of renewable power. Central America Clean Energy Corridor programmatic initiatives will be led by CSP with the support of KPFC.

Activities: IRENA will work to identify opportunities for the accelerated development in Central America, with a particular focus on transmission infrastructure and regulations, and identify potential zones for concentrated renewable power development and links with the SIEPAC transmission corridor. It will contribute to the capacity development of power pools, utilities and regulators to plan and operate grids with a diversified mix of renewable power.

Impact: Integrated power market for renewables in Central America taking advantage of regional scale economies.

81. **Emerging Regional Clean Energy Corridors.** Increasing competitiveness of renewable energy technologies is not only key to countries' challenges in meeting their energy needs, but also a potential commodity for cross-border trade. Increasingly, these opportunities are shaping regional energy strategies. Countries of South East Asia are adopting this approach though the ASEAN (Association of South-East Asian Nations) Power Grid, but more could be done to leverage abundant renewable resources in the region. The same can be said for the Middle East and North Africa (MENA), where vast solar and wind power resources remain to be harnessed and which can yield a new renewable energy boom for the region and beyond. Countries of Southeast Europe are preparing Action Plans to incorporate a greater share of renewable power in their electricity generating mix. There are also major hydropower and wind resources in Central Asia, which are yet to be exploited. IRENA will work with partners and stakeholders at the request of governments to explore these options and accelerate the integration of renewable power on grids in different regions. Emerging Regional Clean Energy Corridors activities will be led by CSP with support provided by KPFC.

Activities: IRENA will support Southeast Asian countries to exploit renewable resources in the region through the on-going integration of the ASEAN Power Grid; assist countries in Central Asia to develop renewable electricity generation, and support countries in South East Europe to investigate opportunities to develop renewable power options more efficiently through better planning and zoning. Activities will also include the launch of a MENA Solar Bridge Initiative to focus on the wind and solar opportunities in the region and their effective integration in regional power grids.

Impact: Effective regional frameworks of cooperation to increase the share of renewables in power grids.

82. **Empowering through Partnerships.** Recognising that capacity building is an essential underpinning of the efforts to accelerate the deployment of renewable energy; gaps in policy and regulatory frameworks, financing and business models and technical components have to be identified and addressed. To enable IRENA to respond effectively and efficiently to the capacity building needs of its growing Membership, the Agency developed a results-based approach to address capacity building needs identified through RRAs, capacity needs assessments and regional initiatives. In 2013, IRENA steered the interaction between five Member countries with proven expertise in the field of geothermal deployment and the Andean countries, as part of the ongoing IRENA Geothermal Initiative in the Andes. This has provided an active interface to share experiences in a range of issues, such as the legal and regulatory frameworks needed to attract investments. Following this approach, in the biennium, IRENA will solicit targeted expertise, financial and other support from Member States, training institutions and development partners, in response to the emerging capacity needs. The capacity building and training activities will complement and strengthen existing national and regional initiatives of IRENA, including RRAs, renewable energy in cities, and regional grid integration amongst others. It will also enable the Agency to create a pool of skilled local experts and build a global IRENA Resource Network to support renewable energy projects in countries and regions. Empowering through Partnerships activities will be led by CSP.

Activities: Empowering through partnerships activities will feature an active interface, in different renewable energy technologies, between countries, to share experiences and know-how to overcome barriers and attract investments. IRENA will solicit expertise from its Member States, training institutions and development partners to provide training programmes to respond to needs identified through RRAs and regional initiatives and develop the capacities of key stakeholders to design and implement legal and regulatory frameworks for geothermal deployment. Finally, IRENA will form a global IRENA Resource Network to supports a wide range of renewable energy projects.

Impact: Enhanced knowledge and skills to design and implement renewable energy policies and projects.

Regional action agenda					
Objective	**Impact**	**Component**	**KPFC**	**IITC**	**CSP**
Regional integration with increased shares of renewables to meet energy needs	Growing renewable power deployment and investment strengthen economic growth, job creation and energy access	Africa Clean Energy Corridor	✓	✓	✓
	Integrated power market for renewables in Central America taking advantage of regional scale economies	Central America Clean Energy Corridor	✓		✓
	Effective regional frameworks of cooperation to increase the share of renewables in power grids	Emerging Regional Clean Energy Corridors	✓		✓
	Enhanced knowledge and skills to design and implement renewable energy policies and projects	Empowering through Partnerships			✓

Resource Requirements 2014-2015 (in USD thousands)[13]	**4,244**	Proportion of IRENA budget	**7%**

Staff costs	**(in USD thousands)**	**1,963**
Non-staff costs		**2,281**
Non-staff costs by component		
- Africa Clean Energy Corridor		612
- Central America Clean Energy Corridor		419
- Emerging Regional Clean Energy Corridors		399
- Empowering through Partnerships		851

[13] Reflecting combined core budget and voluntary contributions from Germany and the United Arab Emirates.

Member Relations, Communications and Outreach

Objective: Actively engage Members, leverage strategic partnerships and communicate with stakeholders and the public

83. The impact of IRENA's implementation of the work programme is underpinned by active engagement of Members in its work. This is strengthened through effective engagement, communications and outreach which delivers strong messages that enhance IRENA's position as the definitive voice of renewable energy worldwide, and drives awareness to galvanise the support needed to effect lasting change, based on critical knowledge products being developed. Engaging with a wide range of stakeholders, including public and private sectors, civil society, academia, and parliamentarians, the Agency will develop and disseminate compelling messages and exercise thought leadership to promote renewable energy development worldwide, based on critical knowledge generated by IRENA.

84. As an intergovernmental organisation, IRENA's membership is not only its governing authority, but also one of its most important assets. Members provide IRENA with the necessary funding as well as guidance on the programmatic and strategic direction of the Agency. They also represent the Agency's most important cooperation partners, as they possess the wealth of experience and knowledge that enriches IRENA's programmatic activities and are the major advocates of the Agency and its work. With IRENA Members accounting for some 80 percent of the global energy consumption, diversity of interest in renewable energy sources, technologies and information is all-encompassing.

85. **Member relations.** IRENA Members provide strategic direction for the Agency and remain actively and substantively engaged throughout the Agency's programmatic cycle. As the organisation continues to grow in membership, activities and relevance, enhanced and effective communication with the membership, through a variety of channels, remains vital. An interactive Member-only e-platform "Remember" dedicated to institutional and programmatic matters, will ease the access for Members in supporting and engaging in the work of IRENA to sustain Members' ownership of its work. Strengthening engagement with Members in the Agency's programmatic activities, as well as outreach to potential members through proactive communication will remain a priority.

86. With the Headquarters Agreement with the Agency's Host Country now in force, the Agency Members' engagement will be further facilitated through a newly established framework of permanent representation that will a new avenue for communication and Member engagement. The accreditation of Permanent Representatives and their active presence at the seat of the Agency will ease the access and enable regular interaction between meetings of the governing bodies. It will also elevate the interest and the level of exchange between Members on the global agenda for renewable energy, and specific IRENA programmes, and contribute to increased collaboration and awareness of renewable energy matters within a broadening constituency.

87. IRENA's governing body meetings will continue to be the main venue for Members' decision-making on all policy, programmatic and administrative matters pertaining to the Agency. The Agency will continue to support these meetings to create a strategic platform for renewable energy debate. With the global spread of its membership, partners and stakeholders, as well as IRENA's mandate specific to renewable energy, the IRENA Assembly, with its high-level segments and meetings showcasing the Agency's flagship activities, is well positioned to act as a convenor for these deliberations and lead the global renewable energy debate.

Activities: IRENA will further strengthen its communication with the membership through regular communication and engagement with Members and the dissemination of information and updates on the Agency's activities. In parallel, IRENA will further develop the framework of permanent representation to further facilitate Members' engagement the Agency's Headquarters. To enlarge the membership of the Agency an increased and targeted outreach to non-Members will be undertaken. IRENA will continue to substantively and organisationally prepare its governing body meetings and support the participation of Members in these meetings.

Impact: Increased membership of the Agency and Members actively engaged in its work.

88. **Communications.** Robust and comprehensive communications and outreach that leverage strategic partnerships, deliver strong messages, amplify IRENA's voice and drive awareness, are vital to galvanise the support needed to effect lasting change. One of the Agency's greatest strengths rests in its wide membership and active engagement of countries in its work. IRENA will tap into this resource to embed its messages and disseminate its products at country and regional levels worldwide. IRENA's interaction with Members – from regular contact with permanent representatives at the seat of the Agency, through the network of focal points, to visits to countries upon invitation, will ensure a strong relationship and continuous sense of ownership by Members.

89. IRENA will seek to build upon the flexible communications capacity that supports the Agency with a more robust communications strategy that will be implemented to reach key decision-makers and the general public. Coordinating and aligning communications activities with IRENA's strategic partners will expand the reach of the Agency. The refinement, expansion and strengthening of the Agency's strategic messaging as well as leveraging its activities and publications will provide the impetus and groundwork for its outreach initiatives.

90. With a solid groundwork of knowledge products and publications now in place, effective communication of those products is of greater importance. Working closely with Members, IRENA will target media outreach efforts to maximise the impact of its work and the work of Members. When appropriate, highly visible press conferences, events and roadshows will be used to support new product launches.

91. IRENA's website, its main interface with the world, will serve as the primary vehicle by which IRENA information and knowledge are made easily accessible and freely available. The development and implementation of a social media strategy will complement ongoing programmatic and communications efforts. The social media strategy will also provide the groundwork for the establishment and operation of key communications tools and new media platforms that target key audiences and stakeholders in the renewable energy landscape.

92. In 2014-2015, IRENA will expand its presence into new platforms and media that strengthen the cause of advancing renewable energy worldwide. These new digital platforms will also provide a framework to collaborate with key partners, organisations and Members. Creative thought leadership platforms will not only give IRENA the opportunity showcase its work, but also act as a convener of the best work in the global renewable energy space. These new platforms will be supported by an intensified focus on more traditional thought leadership platforms, such as op-eds and speaking opportunities.

93. A comprehensive external outreach plan detailing the Agency's events, the preparation and dissemination of its publications, as well as the communications efforts designed to support its programmatic activities will be developed. This living document will support the Agency's efforts to deliver timed campaigns, publications and other information products, and will be a key framework for engagement with Members and stakeholders as they seek greater opportunities for collaboration.

Activities: With a view to putting the Agency's communications activities on a solid footing, IRENA will develop and implement a comprehensive communications action plan which will guide the Agency's increased strategic outreach and engagement in collaborative communications activities with countries and other partners. In support of the ongoing activities of IRENA's programme areas, and to ensure consistency in IRENA's branding and messaging, the communications unit will manage the production and dissemination of institutional reports and knowledge publications. It will also oversee the revamping of the Agency's website, grow IRENA's online presence and develop and implement a social media strategy to enhance the global visibility of the Agency and its work. Along these lines, IRENA will expand its focus on thought leadership platforms and intensify media relations efforts (quantitatively and qualitatively), including relationship building, to position the Agency in the field and globally.

Impact: Robust communications delivering strong messages to key decision-makers and the general public, and driving awareness to galvanise the support needed to effect lasting change.

94. **IRENA Liaison Presence**. The liaison office of the Permanent Observer of IRENA to the United Nations in New York will keep the Agency engaged with key partners in interaction with UN agencies, funds, programmes and initiatives, including the SE4ALL, to enhance coherence of activities and avoid of duplication of work, while positioning IRENA as the Agency entrusted with the global promotion of the sustainable use of all forms of renewable energy. The office will also assist in building partnerships with numerous US-based national and international organisations and facilitate outreach to all UN member countries, in particular with countries that do not have diplomatic representation in the Agency's Host Country.

95. During the founding stages of IRENA, the Preparatory Commission had accepted the offer of the Government of Austria to host a liaison office of IRENA in Vienna, financed by Austria. While this has not yet been implemented, the establishment of such a liaison office would lead to further strengthening of engagement with the SE4ALL initiative. The liaison office would also be charged with collaborating with international agencies and all relevant initiatives, as well as IRENA Members and other country representatives based in Vienna.

Activities: Through its liaison presence, IRENA will maintain regular and focused interaction with the UN agencies, funds, programmes and initiatives as well as other entities relevant to IRENA's work. It will support Headquarters in outreach to Members and potential Members, as required.

Impact: Direct and timely engagement and coordination with international organisations, countries and other entities through IRENA's liaison presence.

Administration and Management Services

96. IRENA's ability to deliver its programmatic responsibilities depends on effective, transparent and efficient administration and management services. IRENA's Division for Administration and Management Services (AMS) ensures that the Agency has the necessary infrastructural, human, finance, and technical assets in place. The Division is also responsible for improving management practices throughout the Agency and for promoting accountability and management evaluation with the aim of improving work processes and procedures. This approach enables continuous management improvement, effective implementation of management policies and new initiatives to empower staff and enhance its ability to carry out its work more effectively.

97. AMS is composed of the following specialised areas: Finance, Budget, Human Resources, Information and Communications Technology, Procurement, Travel and General Services. AMS ensures that the implementation of decisions of the governing bodies, the relevant regulations and rules and reviews by audit and oversight bodies, and all new or revised management policies, procedures and internal controls, meet or exceed the expectations of Members. Within its delegated authority, the Division is responsible also for maintaining close liaison with host country authorities and Members on financial, budgetary, procurement, personnel and common support service matters. In this function, and in close coordination with the host country, the Division will continue to manage the development plans and actual move to the Agency's new Headquarters complex in Masdar City.

98. An Enterprise Resource Planning system (ERP) will be implemented in 2014 to automate the approved policies and procedures of Finance, Human Resources, Procurement and Travel, within the provisions of the Director-General's Delegation of Authorities Directive. ERP will enable employee self-service workflows such as leave applications, purchase requisition, and travel and payment requests, and will be integrated into IRENA's current intranet portal – REsource. This will ease the administrative burden and enable efficient, transparent and auditable functioning of the processes. Importantly, the implementation of ERP will facilitate application of the International Public Sector Accounting Standards (IPSAS).

99. **Human Resources**. IRENA's Human Resources framework is aimed at attracting, developing and retaining a wide spectrum of talent, taking into account the necessity of securing the highest standards of efficiency, competence and integrity, with due regard to the importance of recruiting staff primarily from Member States, as well as the adequate representation of developing countries with emphasis on gender balance. Human Resources policies and systems will continue to be monitored and adjusted to respond to the Agency's evolving needs. This will include an active promotion of staff wellbeing and introduction of systems to facilitate work-life balance through programmes that take into account contemporary approaches. The performance management tools in place will enable the Agency to monitor and maximise the performance at the individual, team, unit and organisational level. Furthermore, a need-driven Agency-wide training will continue to be provided to enhance staff skills and performance, as well as to address important institutional issues such as ethics.

100. **Finance and Budget**. The administration of financial resources of the Agency in compliance with IRENA's Financial Regulations and Procedures, as well as the relevant legislative mandates, is of paramount importance, as the accounting and finance policies facilitate sound management of all resources entrusted to the Agency. Appropriate processes and procedures will continue to be closely monitored for further improvement to ensure effectiveness and efficiency, as well as accountability through accurate and regular reporting and adherence to IPSAS. In addition, the management of IRENA's budgetary resources will remain central to facilitate the coherent utilisation of approved budget and monitoring of the budgetary resources, in coordination with programmatic divisions and through linkages to PMO.

101. **Procurement**. The Procurement Section is responsible for procurement of all goods and services, required for the proper functioning of IRENA. The general principles that govern all procurement transactions, pursuant to Financial Regulation 10.1, are fairness, integrity, transparency of the procurement process, best value for money and effective competition. Procurement activities are increasing both in terms of complexity and volume of transactions, therefore, strategically planning procurement activities of the Agency to ensure effective competition and timely procurement of goods and services with best value for money will be further systematised in the coming biennium. The procurement policies and business processes, including delegation of authority for procurement activities, follow best international practices and standards and are kept up to date.

102. **Travel and General Services**. The Travel and General Services provides cost-effective and efficient travel services, as well as the overall facility management and other general services for the Agency. This includes logistical arrangements for IRENA events and workshops worldwide, including ticketing, venue, hotel bookings, transportation, and other logistics-related matters. IRENA's move to the new Headquarters Complex in Masdar city in the course of the 2014-2015 biennium, coupled with the expanded programmatic activities, will result in a major long term increase in the workload and responsibilities of this function.

103. **Information and Communications Technology**. IRENA's Information and Communications Technology (ICT) provides a broad range of Agency-wide solutions and services to IRENA offices, which operate in a single virtual office environment. Technical solutions will continue to be developed to meet the Agency's information technology needs, including suitable web-based applications, managed and secured infrastructure supported by wireless network, printing, voice and audio-video technologies to enable personnel and programme partners to connect, collaborate and share knowledge. In the course of 2014-2015 biennium, ICT will move major services like email, IRENA's intranet REsource and the internal collaborative tool Lync, to cloud computing, using latest platform, tools and technologies. This will enhance the security, efficiency, performance and availability of applications and provide better Disaster Recovery and Business Continuity for the hosted applications.

Thematic Programme Areas

Programmatic Activities

Thematic area: Planning for the global energy transition

Objective: Mainstreaming renewable energy options and strategies in energy plans

Resources: **10,816 (USD thousands)**

Component	Impact	Division	Activities	Deliverable (2014-2015)	Deliverable (subject to additional voluntary contributions)	Indicators of achievement[14]	Timeframe
SE4ALL Renewables Hub	Established platform for cooperation and concerted action by stakeholders to accelerate deployment of renewable energy	CSP IITC KPFC	Develop the hub function with the participation of all stakeholders, management of IRENA activities and development of a forward looking renewable energy reporting framework for 2030	Inclusive cooperation framework for all actors, and monitoring and reporting framework for 2030 renewable energy doubling target		- Operational framework agreed with SE4ALL stakeholders - Framework put into operation	Ongoing
			Support the hub function by developing analysis on the role of women in RE, RE for sustainable livelihoods, and the Nexus	- Develop an analytical approach on the role of women in RE and policy recommendations as input to the conference - Contribute to the SE4ALL Hub on issues related to RE for sustainable livelihood and the Nexus	International conference on the role of women in RE	- Enhanced global awareness on the role of women in improving livelihoods through RE	2014-2015
			Develop policy recommendations and technical advisory services related to High Impact Opportunities (HIO)		White papers with concrete recommendations on:1) enabling legal and regulatory frameworks for scaling up mini-grids; 2) the role of renewable energy in managing peak demand in cities; 3) developing financing solutions for small-scale renewable energy in islands	Recommendations contribute to High Impact Opportunities activities in SE4ALL	2014-2015

[14] Indicators of achievement assume full funding from combined core budget and voluntary contributions from Germany and the United Arab Emirates, as well as additional voluntary contributions to be mobilised.

Component	Impact	Division	Activities	Deliverable (2014-2015)	Deliverable (subject to additional voluntary contributions)	Indicators of achievement	Timeframe
REMAP 2030	Comprehensive and acknowledged roadmap on options and action for doubling the share of renewable energy by 2030	IITC KPFC	Further develop the REMAP 2030 analytical framework and develop guidance on possible pathways, technology and policy options and international cooperation, as well as country and regional analysis, on doubling the share of RE by 2030	Comprehensive policy and technology roadmap -2nd edition		- REMAP2030 influences global debate and catalyses action - REMAP used to shape the IRENA work programme	Q4 2015
				2 workshops of national REMAP expert teams		- National experts engaged in the development of REMAP2030 - More and better quality country data feed the global debate - Global insights are increasingly used for national policy making	Q4 2014 (1 workshop) Q2 2015 (1 workshop)
				Development of country action agendas		Implementation and application of REMAP technology options	Q3 2014 (1 meeting) Q1 2015 (1 meeting)
			Establish three REMAP action teams; two on substantive themes (transport, energy efficiency) and one to support the SE4ALL RE hub initiatives	REMAP - Transport and efficiency roadmap reports		- Reports' recommendations cited in RE global debate - New strategies identified that allow for higher RE shares	Q4 2015
				REMAP/SE4ALL framework for cooperation amongst hubs		- Alignment in approaches with other SE4ALL hubs - New access, efficiency and RE nexus strategies identified that yield higher benefits and reduce cost - REMAP used to guide SE4ALL activities	Q3 2014 (1 meeting) Q3 2015 (1 meeting)
			Develop Technology Briefs with concise, policy-relevant and objective information on technology solutions	10 additional Technology Briefs for IRENA technology repository		Technology Briefs referenced as authoritative source on RE technology	Q2 2015
			Assess the socio-economic impact of renewable energy deployment in REMAP 2030	Analysis of the impacts of the REMAP 2030 scenarios on employment, income, energy security, and trade balance		REMAP2030 reflects the broader macro-economic benefits of renewable energy deployment	Q4 2015

Component	Impact	Division	Activities	Deliverable (2014-2015)	Deliverable (subject to additional voluntary contributions)	Indicators of achievement	Timeframe
REpowering Cities	Increased awareness, partnerships and technical support to local governments on renewable energy options in cities	CSP KPFC	Address energy-related issues in cities by undertaking assessments to identify relevant RE deployment options to complement energy efficiency measures		Assessment methodology to help local governments prioritise energy efficiency and RE options	3 cities complete a RE assessment	2014-2015
			Build a systematic approach for expertise and knowledge transfer in waste-to-energy, solar PV and solar thermal, and heating and cooling, through technical assistance and peer-to-peer learning		A systematic approach to transfer expertise and knowledge amongst cities in specific technology areas, designed and implemented	Concrete and focused technology cooperation between practitioners in 4 cities	2014-2015
			Identify and promote successful renewable energy deployment business models in cities	A conference to showcase effective business models for deploying RE in cities in partnership with the Global Sustainable Cities Network and Masdar City		90 entrepreneurs, decision makers and other stakeholders attend the workshops	2014-2015
				Three workshops to build capacity of entrepreneurs, decision makers, and other key stakeholders in cooperation with Member States			
			Analyse policies for the deployment of RE in Cities		Guidelines on policy measures needed to integrate RE at the local level	Outcomes and recommendations used by city decision makers	2014-2015
Water, Energy and Land Nexus	Analytical and empirical framework for informed cross-sectoral policy and decision-making in resource-constrained environments	CSP KPFC	Develop an empirical policy framework and deploy an energy-centric tool that will allow policy-makers to empirically assess the impact of renewable energy in the water/energy/land Nexus in specific settings, and to bridge the existing knowledge gaps on the benefits of renewable energy deployment from a Nexus perspective	A comprehensive, analytical and empirical approach to inform policy-making in designing strategies that emphasise integrated resource management		Reference to the Nexus approach to resource management in the sustainable development energy debate	2015
				Tool for policy-makers to quantitatively assess the impact of RE in the nexus and country case studies to demonstrate it		Raised awareness on the role of RE in the Nexus for greater integration in decision-making	Q4 2015
				Capacity building of the nexus tool		Trained country-level decision makers	Q4 2015
Transforming Power Grid Infrastructure	Comprehensive knowledge, resources and guidelines for grid and storage technologies for renewables deployment	IITC	Develop roadmaps on RE grid and electricity storage to facilitate RE integration in different settings	Two grids & storage technology related workshops to engage stakeholders in the development of roadmaps		- Roadmap recommendations agreed upon - Better understanding of Member countries how to cope with high shares of variable renewable power	Q4 2014
				Report on consolidated grid & storage technology roadmaps		Report recommendations utilised by planners and decision makers at the national level	Q3 2015
			Refine IRENA grid-stability assessment methodology, and assistance to countries in the application to facilitate integration of renewables	Improved and extended IRENA grid-stability assessment methodology and country support in its application		- Methodology used by countries - Increased understanding and consensus how to plan for grid stability	2014-2015
			Development of broad knowledge framework for grid, storage and management of variability	Technical guide(s) with latest developments in RE grid integration technologies, including solutions for storage, smart grids and mini-grids		- Reports' recommendations cited in RE integration debate - Member countries use IRENA information to plan grids and storage	2014-2015
				Analysis and recommendations on economic and technical feasibility of options of grid and storage technologies for integration of renewables		- Increased awareness among project developers and other stakeholders on RE grid integration technologies - Better understanding of market opportunities	Q4 2015

Component	Impact	Division	Activities	Deliverables (2014-2015)	Deliverable (subject to additional voluntary contributions)	Indicators of achievement	Timeframe
Planning With Renewables	Renewable energy mainstreamed in energy planning, with a focus on the power sector	IITC	Comprehensive overview and assessment of current planning methodologies for RE integration into energy systems	Report on effective planning methodologies and practices for RE integration into energy systems		- Report's recommendations cited in RE debate - Better understanding of energy supply and demand feedbacks results in more efficient and effective RE policies	Q4 2014
			Analyse the costs of RE integration into energy systems	Comprehensive policy-relevant knowledge framework on RE systems integration cost		Recommendations utilised by decision makers and cited in RE integration debate	Q4 2015
			Facilitate regional exchanges on best practices in system planning	Two regional workshops on best practices in system planning with RE in LAC and Asia		- Active engagement of key regional stakeholders - Increased understanding of key planning framework components - Guidelines for its design accepted and deployed	Q4 2014 (1 workshop) Q4 2015 (1 workshop)
			Inform the development of long-term global and regional energy outlook through engagement with energy modelling stakeholders	Cooperation with entities developing modelling scenarios		- Insights translated into policy-relevant information for Members - Better understanding of the planning uncertainties and how to deal with these in RE policy strategy development	Ongoing
Renewables Readiness Assessment and Advisory Services	Countries equipped with knowledge and expertise to implement an enabling policy framework to upscale renewable energy deployment	CSP IITC	Facilitate RRAs, a country-driven process for assessing key policies, potentials and technologies for renewable energy deployment and the actions necessary to create an enabling policy and decision-making framework in Africa, Asia-Pacific, the Middle East and North Africa (MENA), and Latin America and the Caribbean (LAC)	- Facilitate the RRA process upon request in 10 member states. Five (5) RRA reports are published in 2014 and five (5) in 2015 - Design and operationalise an effective approach to utilise the expertise offered by Renewable Energy Policy Advisory Network (REPAN) in RRA and other IRENA programmes	- Facilitate the RRA process upon request in additional member states.	- Implementation of actions identified in the RRA country report - Collaboration with at least one international organisation as a partner for each RRA and follow up	2014-2015
			Utilising IRENA's knowledge base and technical expertise, provide in depth, targeted technical advisory services upon request in resource assessments, legal and regulatory frameworks, implementation of standards and quality assurance mechanisms, structuring public-private partnerships, and RE technology deployment frameworks such as small hydro development in Latin America, biomass co-generation, solar and wind in Caribbean and Africa	- Advisory services on standards and quality assurance and enabling frameworks for deployment of renewables provided - Best practices in financing small hydro disseminated	- Advisory services on structuring public-private partnerships and resource assessments provided	- 15 countries are able to utilise the advisory services to design implementation pathways for accelerating RE deployment - Advisory services enable participating Member States to make informed decisions and drive actions - Improved frameworks for small hydro investment in 5 LAC Countries	2014-2015

Thematic area: Gateway to knowledge on renewable energy

Objective: Renewable energy knowledge accessible to all

Resources: **7,624 (USD thousands)**

Component	Impact	Division	Activities	Deliverable (2014-2015)	Deliverable (subject to additional voluntary contributions)	Indicators of achievement	Timeframe
Knowledge Gateway	Authoritative, freely accessible global knowledge on renewable energy	KPFC	Design of the structure and launch of the Knowledge Gateway platform	Web-based Knowledge Gateway platform	2 outreach workshops to seek partnerships with other knowledge organisations	Establishment of the Knowledge Gateway as the single publicly available source of authoritative renewable energy information	Q4 2014 2014-2015
			Integration of additional data and information from IRENA projects and external sources into the platform	Wider range of data and information available through the Knowledge Gateway	Introduction of the Open Link Data to include data from third parties	Diverse streams of data and information from the Knowledge Gateway used as the basis of analysis by different stakeholders	2015
REthinking Energy (Institutional Publication)	Informed global debate on the transformative potential of renewable energy technologies to address rising global energy challenges	KPFC	Identify themes, research and produce two editions of the annual REthinking Energy publication	Second and third editions of REthinking Energy publication		Annual report becomes authoritative reference work for renewable energy developments	Q4 2014 Q4 2015
Renewables statistics	Solid foundations established for the most complete, up-to-date and freely accessible global renewable energy statistics database with high quality data	KPFC	Collection and standardisation of RE data from countries and secondary sources	Data collected from member countries and secondary sources, standardised, validated and posted online		IRENA renewable energy statistics database widely cited as data source in analytical reports	Ongoing
			Improvements to RE data accounting methodologies	Guidebook on practical approaches to RE accounting and reporting		Guidebook widely used by Members in their RE statistics reporting	Q4 2015
The Global Atlas	Enhanced global awareness of renewable resource potentials and policy-makers enabled to make informed planning decisions	IITC KPFC	Expand the coverage of the Global Atlas to all 6 renewable energy sources (solar, wind, bioenergy, geothermal, hydropower, marine energy)	Global Atlas interface and data infrastructure upgraded to accommodate maps for five renewable energy sources	Global Atlas interface and data infrastructure includes maps for marine energy	The Global Atlas cited as the reference for resource assessment of all 6 renewable energy sources	Q4 2015
				Data quality framework (quality, validation and limit of use of the data) developed and implemented in the entire Atlas		Increased understanding by Global Atlas users of the limits of use of diverse datasets in the Atlas	Q4 2015
			Capacity building for energy planners and policy-makers on the use of spatial planning techniques for energy systems planning and policy making, as well as beginning the integration of the Atlas and Costing work		Develop a practical capacity building module targeted at energy planners and policy-makers	50 energy planners and policy-makers trained	2014-2015
				Detailed guidebook on the methods used for mapping renewable energy potentials		Countries use the guidebook to assess their technical renewable energy potential	Q4 2015
			Facilitation of resource measurement campaigns	Upon countries request, scope the need for technical assistance and seek for possible resources and technical partnerships to initiate measurement campaigns		Address requests of 5 countries	Q4 2015

Component	Impact	Division	Activities	Deliverable (2014-2015)	Deliverable (subject to additional voluntary contributions)	Indicators of achievement[19]	Timeframe
IRENA Renewable Energy Learning Partnership (IRELP)	Freely accessible renewable energy education and training database enriched with career opportunities and guidance, and best practices for long-term education strategies	KPFC	Establishment of an online forum to facilitate the development of renewable energy curricula by stakeholders	Launch of the online forum and establishment of an online community		Facilitation services used by 5 educational institutions for the development of renewable energy curricula	Q4 2014
			Expansion of the renewable energy career centre	Develop and expand the career centre and provide information on RE job opportunities and links with employers and employment agencies		IRELP contains access to RE employment opportunities	Q4 2015
			Cooperation with partners to increase access to and awareness of renewable energy education and training	Joint promotion of renewable energy education, training and tools worldwide		Active participation of IRELP at global education fora	Q4 2014
RE Policy and Best Practice: Status and Trends	Global reference repository of renewable energy policies, regulations and best practice	KPFC	Analysis of policy status and trends based on standarised information on renewable energy policies and measures from Members	Contents of the policies and measures database updated on a biannual basis and expanded through cooperation with leading RE policy database providers		Double the number of new entries in the Policy Database from the 2013 call	Q4 2015
				Annual report on status and trends in renewable energy policy		Policy reports disseminated at 10 events	Q4 2014, Q4 2015
			Systematise best practice and case studies on renewable energy deployment	Case studies and best practice information integrated in the Knowledge Gateway		Best practices utilised by countries for informed decision making	Q4 2015
Renewables: The True Costs	Authoritative and comprehensive information and analysis of the true cost competitive-ness of renewables globally to help shape national and global debates, and global analysis of real cost issues and clear policy recommendations and tools to accelerate renewables deployment.	IITC	Renewable Costing Alliance and expansion of the IRENA Renewable Cost Database to become the most comprehensive resource on renewable energy costing	Launch and operation of the Alliance, substantially expanding the Cost Database and improving the quality of data available		- Increased membership of the Alliance adds data into the Cost Database - Alliance is the global network for cost issues on renewable energy technologies	Ongoing
			Up-to-date analysis of the improved cost competitiveness of solar PV compared to local retail electricity prices	Quarterly report on PV parity evolution for 10 countries		Informed decisions based on reliable information on PV parity	Ongoing
			Expansion of IRENA Costing Reports to cover the entire spectrum of energy uses	Three RE cost reports: Updated power generation, marine/aviation/rail transport, grid integration technologies, RE integration systems costs		- Reports disseminated in 10 countries - IRENA costing data and analytical reports cited	Q4 2014 (1 report) Q4 2015 (2 reports)
Global investment dynamics	Solid global resource of RE investment information and financial flows, accessible to all, showcasing global investment dynamics and potential sources of financing	KPFC	Complementing information on renewable energy investment by developing standardised data on gaps identified, including small-scale renewable energy applications and a mapping of sources of possible financing for project developers	Collection of targeted investment data to support policy-makers and IRENA analyses	Analysis of renewable energy investment flows, highlighting investment trends and gaps and business models	Access to more comprehensive data on RE financial flows	2014-2015
				Methodological paper establishing a framework for comprehensive renewable energy investment flows data collection		Paper used by countries in their renewable energy investment flows reporting	Q4 2015
Coalition for Action on Public Support to RE	Global coalition effectively disseminating authoritative, consistent, and unified messages on RE	KPFC	Operationalise the Coalition for Action on Public Support to gather and disseminate effectively renewable energy facts and analysis in collaboration with major RE advocates in industry and civil society	Establishment of the structure, operational mode and strategy of the Coalition for Action		20 members join the Coalition and develop joint activities	Q2 2014
				Formation of a network of RE public information experts		50 communication officers and media outlets become part of the network and start working on improved messaging on RE benefits	Q4 2014
				Development of innovative mechanisms for dissemination of information		RE facts better known and positively perceived by stakeholders through the innovative mechanism	Q2 2015

Thematic area: Enabling investment and growth

Objective: Improving policy frameworks and enabling market conditions for accelerated deployment of renewable energy

Resources: **8,252 (USD thousands)**

Component	Impact	Division	Activities	Deliverable (2014-2015)	Deliverable (subject to additional voluntary contributions)	Indicators of achievement	Timeframe
Policy assessment	Contribution to the global debate and increased awareness of policy options in a dynamic energy market	KPFC	Assess the key challenges faced by policy-makers in adapting to the structural changes in the energy sector (specifically changing ownership structures), analyse best practices in adopting effective measures and provide recommendations	Analysis of the impact of the changing market dynamics, including ownership structure, in the energy sector on RE deployment and policy adaptation measures		Increased understanding of timely policy adaptation measures required in dynamic market conditions	Q4 2014
Regional Market Analysis	Enhanced global knowledge of policy options for opening energy markets to renewable energy investment	KPFC	Analyse regional markets for the deployment of RE in two regions, identify best practices of several countries and formulate recommendations	Regional assessment of status and trends in the LAC region to draw policy lessons, identify best practices and help leverage potential synergies	Regional workshop and outreach to discuss and disseminate the results of the LAC assessment	Improved knowledge on opportunities in the RE sector	Q4 2015
				Regional market assessment of policies and trends for RE in the GCC, including best practices on policy, regulatory and administrative frameworks facilitating the transition to clean energy systems	Regional workshop and outreach to discuss and disseminate the results of the GCC assessment	Improved knowledge on opportunities in the RE sector	Q4 2015
ireValue: Social, Economic and Environmental Impacts	Unique knowledge platform on socio-economic and environmental impacts empowers policy-makers and increases public awareness with relevant analysis and information	KPFC	Develop the knowledge framework on socio-economic impact of renewable energy deployment (income, trade balance, energy security) of RE deployment for solar, wind and off-grid applications. With partners, carry out studies that analyse experiences and best practices from different countries and regions that will focus on the adoption of policies that maximise value creation and the dissemination of existing tools that allow policy-makers to empirically assess selected socio-economic impact	Re Jobs - Comprehensive and authoritative analysis on the status and trends of renewable energy jobs drawing from the IRENA data collection on jobs		Annual analysis on renewable energy jobs referenced in the international debate	Q4 2014, Q4 2015
				Report on the socio-economic impacts of large-scale as well as off-grid renewable energy technologies		Increased understanding of the business case for renewable energy among policy-makers, including local content	Q4 2014, Q4 2015
					Dissemination of tools and methodologies to estimate the socio-economic impacts of renewable energy deployment	Developed national frameworks for the estimation of the socio economic impact of RE deployment	2014-2015
			Study environmental impact, including analysis of policies for end of life treatment of PV modules through a multi-stakeholder consultative process		Formulation and dissemination of best practices on end of life treatment of PV modules	Increased adoption of best practices by policy-makers and industry	2014-2015
Energy Pricing	Increasing investment in renewable energy by developing guidelines and approaches to optimal energy pricing frameworks and reforms required in current policies	KPFC	Analyse energy pricing frameworks under specific market conditions, with the objective of developing recommendations for economically, socially and environmentally optimal pricing that enables renewables technologies to be effectively integrated in decision-making	Contribution to MENAREC 6 in Libya in May 2014 through an analytical framework for North Africa		Outcomes and recommendations used by MENA countries decision makers	Q2 2014
				Report on the impact of energy pricing on renewable energy deployment in GCC countries		Informed policy making in GCC countries on the impact of energy pricing structures of renewable energy deployment	Q3 2014
					Development of guidelines and approaches on energy pricing	Guide disseminated and substantiated by multi-stakeholder dialogue on reform	2014- 2015

Component	Impact	Division	Activities	Deliverable (2014-2015)	Deliverable (subject to additional voluntary contributions)	Indicators of achievement	Timeframe
RE finance	Enhanced understanding of risks and innovative mitigation options and tools to develop bankable projects to facilitate renewable energy investment	IITC KPFC	Analyse risk and evaluate risk mitigation instruments in renewable energy investment	Report classifying the risks, identifying the gaps in risk mitigation and evaluating the performance of existing risk mitigation instruments		Report used as a reference in the renewable energy investment de-risking debate	Q2 2014
					High-level meeting about risk mitigation, including political and technology risks	Inform high-level decision makers of innovative risk mitigation options in renewable energy investment	2014-2015
			Develop technology- and region-specific modules for the IRENA project development tool, the "Project Navigator"	Expansion of the navigator to include additional technologies (Biomass, Concentrated Solar Power, Geothermal and Hydropower) and region-specific aspects (financial sources, regulatory, policy and technical aspects required for project development)		Expanded Project Navigator utilised by project developers in three regions to improve bankability of projects	2014-2015
			Validate and refine the Project Navigator tool by carrying out 7 pilot studies	Refined Navigator based on the results of 7 pilot projects in collaboration with partners (ADFD, Pacific Fund)		Improved bankability of the 7 projects	Q4 2014 (3 pilots) Q4 2015 (4 pilots)
Cooperation with the Abu Dhabi Fund for Development	Investments in projects with replicable and/or innovative business models that promote energy access in developing countries	KPFC	Support the implementation of two project cycles of the IRENA/ADFD project facility	Annual award of approximately USD 50 million for projects under the IRENA/ADFD project facility		Disbursement of funds to selected projects	Ongoing
Quality Assurance and Standardisation	Higher investor confidence through development of authoritative information and advice on standards and quality assurance	CSP IITC	Operationalise standards and quality assurance mechanisms tailored to the needs of IRENA Members	Technical advice to regional initiatives on quality assurance for RET - regional studies and workshops		Incorporation of IRENA's recommendation in regional initiatives for quality on RET	Q4 2014 (1 region) Q4 2015 (2 regions)
			Develop best practices and recommendations on quality assurance for selected RE technologies	Report on development and implementation of quality assurance mechanisms for three renewable energy technologies, including solar domestic hot water and off-grid PV systems		- Report's recommendations cited in RE quality and markets debate - Deployment of IRENA recommendations results in higher quality and increased market confidence	Q4 2014 (2 reports) Q4 2015 (1 report)
			Develop and operate a Standards and Patents information platform	Expansion and improvement of web platform for RE standards and patents		Up-to-date and improved web-based platform	Q4 2015
			Develop competency standards for trainings to certify installers in renewable energy technologies through a consortium of technical institutions, industry associations and forums of leading practitioners	- Establish a global collaboration for a recognised certification scheme of renewable energy technology installers - starting with solar PV - Preliminary competency standards developed for solar PV installers certification training		Provide qualified skilled technical force to support deployment of renewable energy projects in the country	2014-2015
			Assist countries in adopting and implementing certification of renewable energy technology installers through national and regional technical institutes		Dissemination of the certification scheme for solar PV installation and operation	6 countries adopt a recognised certification scheme for solar PV installation and operation	2014-2015

Component	Impact	Division	Activities	Deliverable (2014-2015)	Deliverable (subject to additional voluntary contributions)	Indicators of achievement	Timeframe
Innovation and Research, Development and Demonstration (RD&D)	Enhanced innovation through international cooperation and streamlined national RD&D plans	IITC	Analyse the policy framework for optimal technology deployment and provide advice for successful diffusion of modern RE technologies in developing countries	Assessment of options for modern biomass in Africa and advanced biofuels in Asia		Results of the studies used in policy making and planning for deployment	Q4 2014 (1 region) Q4 2015 (2 regions)
			Map and analyse the gaps for and benefits of collaborative RD&D on RE technologies in regions and RD&D planning	- Regional assessments on collaborative RD&D for RE in Africa, Eastern Europe and Central Asia - Advice on national RD&D programming upon request		Recommendations used in regional RE innovation and market strategies	Q4 2014 (2 reports) Q4 2015 (1 report)
			Analysis of future technologies and potential for deployment in markets to match new energy needs with innovative and cost-effective RE solutions	Studies on innovative RE technologies, including advanced biofuels, new electricity storage, mini-grid, floating off-shore wind		Study contributes to national perspectives for expanding technology options	Q4 2015

Thematic area: Renewable energy access for sustainable livelihoods

Objective: Contributing to sustainable livelihoods through access to renewable energy

Resources: **3,393 (USD thousands)**

Component	Impact	Division	Activities	Deliverable (2014-2015)	Deliverable (subject to additional voluntary contributions)	Indicators of achievement	Timeframe
IOREC platform	Scaling up off-grid renewable energy deployment by providing the platform for stakeholder engagement on a global level	KPFC	Support enabling frameworks for off-grid renewable energy deployment	Second International Off-grid Renewable Energy Conference and Exhibition and associated activities within the IOREC platform		Policies for mainstreaming RE in off-grid energy supply	Q4 2014
				Regional workshop with practitioners and public institutions responsible for rural electrification on barriers and solutions			Q4 2015
Mini-Grids	Enabling conditions for renewable energy-based mini-grid deployment to shift the paradigm for universal energy access	CSP KPFC	Facilitate a consultative process and develop an analytical framework to increase RE mini-grid deployment	Recommendations on policies and regulatory measures to support renewable energy-based mini-grid deployment		Improved policies for the deployment of RE mini-grids	Q4 2015
			Build a public-private partnership to promote hybrid mini-grids	Preparation of site-specific business models for 6 sites, including recommendations on financial mechanisms, local stakeholder base and key steps required for implementation of demonstration projects		Financial closure of at least 3 hybrid/RE grids projects	Q4 2015
			Build a cross-cutting mini-grid initiative focusing on policy, regulatory, finance and business models in collaboration with well-established implementing and financing institutions including the private sector	Four analytical country studies focusing on the policy and regulatory frameworks necessary to promote investments in mini-grids, including follow up for designing implementation strategies		10 mini grids projects initiated in countries	2014-2015
			Build capacity of policy-makers and entrepreneurs to deploy renewable energy mini-grid at scale	Capacity needs assessment in one regions and two training workshops on enabling frameworks and business model delivery	Capacity needs assessment and training workshops on enabling frameworks and business model delivery in additional regions	80 policy-makers and entrepreneurs trained	2014-2015
Off-grid for Niche Applications	Accelerated deployment of off-grid renewable energy solutions in isolated communities and urban areas	CSP	Assist countries, upon request, in developing deployment strategies and facilitate knowledge exchange on off-grid renewable energy technologies in rural and remote settings	Expert training workshops conducted for off-grid applications for productive use (e.g. solar pumping and micro-hydro)		40 people trained in 2 workshops on RE applications	2014-2015
			Partner with private sector actors with regional or global presence to design and implement a plan to showcase renewables technologies for off-grid applications in urban and peri-urban areas		Implementation strategies for off grid designed with private sector players	Partnerships with 3 private sector players to showcase renewable energy off grid application	2014-2015
Capacity Building for Entrepreneurs	Increased renewable energy deployment through greater financial and technical assistance to SMEs	CSP	Support SMEs by creating ex-pert groups to provide guidance to RE entrepreneurs on identify-ing business opportunities	Expert groups established		- 20 experts commit to mentor entrepreneurs through advisory boards - 4 existing business incubation centres will support energy entrepreneurs - 10 financial institutions trained on financing RE projects	2014-2015
			Support business incubation centres and facilitate sharing of experience among similar institutions across regions	Facilitate experience sharing between business incubation centres and similar institutions across regions			
			Build capacity of financing institutions to assess technology risks in developing countries	Two webinars to build the capacity of public service officials for developing proposal for funding	Two training workshops for financing institutions to build capacity to assess technology risks and provide best practices to structure lending to RE project		

Thematic area: Islands: lighthouses for renewable energy deployment

Objective: Island energy systems transformed through renewable energy

Resources: **2,972 (USD thousands)**

Component	Impact	Division	Activities	Deliverable (2014-2015)	Deliverable (subject to additional voluntary contributions)	Indicators of achievement	Timeframe
GREIN	Improved knowledge of solutions and conditions for investment in renewable energy applications on islands	CSP IITC	Establish and support of 6 GREIN clusters	- Clusters on resource assessment, waste-to-energy, desalination, roadmaps, grids and tourism established and operational - Report on settings for success in implementing renewables on islands		Work plans implemented by clusters	Q4 2015
			Assist islands in the development of their Renewable Energy Roadmaps	Technical assistance provided for island roadmaps		Recommendations of the roadmaps integrated in planning processes of islands	Q4 2015
			Analyse islands' grid stability for the integration of a higher share of renewable energy upon request	Advice to island utilities on how to maintain grid stability with high shares of variable renewables results in accelerated deployment		Higher share of renewables integrated in island grids	Q4 2015
			Demonstrate the business case for investments in renewable energy in the tourism sector	RE audits completed in 9 islands		- 9 hotels embark on renewable energy audits - 2 hotel associations adopt a renewable energy agenda	Q4 2014
			Demonstrate the business case for waste-to-energy and desalination systems	Cost/benefit analysis for waste-to-energy and desalination systems on islands with projected payback periods		Islands undertake solar desalination and waste-to-energy projects	2014-2015
			Assist islands to develop renewable energy resource assessment strategies	Guidebook for detailed wind resource measurement on islands		Islands use the guidebook to help produce bankable data for wind projects	Q3 2014
Partnerships for Action in SIDS	Strengthened partnerships to advance renewable energy deployment in SIDS	IITC	Showcase opportunities for RE deployment through IRENA activities on islands as a contribution to the SIDS Conference in Samoa	Contribution to the Conference and building partnerships for action with islands and development partners	Follow-up on renewable energy-related outcomes of the Conference	Inclusion of renewable energy in the post-conference action agenda	2014-2015
Building Capacity in Islands	Improved capacities to meet national renewable energy targets and attract investments in SIDS	CSP	Implement the on-going IRENA capacity building initiatives in Pacific SIDS	- 2 training workshops on policy and regulatory frameworks - 3 training workshops and follow-up technical assistance for financing institutions		- Lessons learnt from Pacific SIDS replicated in other Islands through GREIN - Pacific Islands gradually transition to promoting renewable energy projects with commercial financing - 5 SMEs deploy renewable energy technologies for meeting their energy needs	2014-2015
			Assist island States to create a pool of certified technicians	One training workshop to certify renewable energy engineers and technicians	Additional training workshops to certify renewable energy engineers and technicians		
			Provide targeted technical assistance to SMEs in the Caribbean to deploy renewable energy technologies	Training workshops for SMEs in Caribbean and AIMS islands			

Thematic area: Regional action agenda

Objective: Regional integration with increased shares of renewables to meet energy needs

Resources: **4,244 (USD thousands)**

Component	Impact	Division	Activities	Deliverable (2014-2015)	Deliverable (subject to additional voluntary contributions)	Indicators of achievement	Timeframe
Africa Clean Energy Corridor	Growing renewable power deployment and investment in Eastern and Southern Africa strengthens economic growth, job creation and energy access	CSP IITC KPFC	Implement the action agenda for the Clean Energy Corridor formulated in close consultation with regional and national stakeholders	Identification and analysis of renewable power development zones and associated transmission corridors in Eastern and Southern Africa Power Pool countries	Workshops and outreach activities to strengthen the engagement of the donor community and the private sector in the Africa Clean Energy Corridor	- Ministerial endorsement of an action agenda - 2 renewable power development zones identified - 40 participants from Eastern and Southern Africa Power Pool countries are trained in RE zoning and system planning - Increased investments in renewable power	2014-2015
			Support country and regional planning processes and identify potential renewable power development zones	Workshops to promote integrated resource planning of generation and transmission facilities in the Eastern and Southern African Power Pool countries			
			Forge regional consensus on long-term needs for new generation and transmission capacity needed to harness renewable energy	Agreement reached on long-term needs for generation and transmission capacity			
			Assist countries and regional entities to develop enabling regulatory frameworks	- Recommendations for harmonised regulatory frameworks to promote renewable power investment and trade - Workshops on market and regulatory frameworks to encourage the market entry of renewable power sources in Africa			
			Build the capacity of policy-makers, utilities, grid operators to incorporate increased shares of variable renewable power	- Capacity building workshops to help power pools in Africa assess the options for renewable power development zones - Capacity building workshops to help transmission utilities in Eastern and Southern Africa Power Pools operate power grids with a diversified mix of renewable power plants			
			Assess financial models and mechanisms for lowering the cost of capital	- Recommendations on implementable mechanisms to lower the cost of finance - Dissemination of strategies for reducing costs of capital for renewable power options in Africa through workshops		At least 2 financial institutions actively considering mechanisms to lower the cost of finance	2014-2015

Component	Impact	Division	Activities	Deliverable (2014-2015)	Deliverable (subject to additional voluntary contributions)	Indicators of achievement	Timeframe
Central America Clean Energy Corridor	Integrated power market for renewables in Central America taking advantage of regional scale economies	CSP KPFC	Identify opportunities for accelerated renewable power development in SIEPAC with a focus on transmission infrastructure and regulations	- Report on gaps and opportunities for renewable power development, including gaps in financing - Convene stakeholders to discuss key actions for zoning, planning, and enabling markets and finance that could help overcome the barriers - Assessment of regulatory frameworks to promote investments, trade and long-term contracts	Workshops and outreach activities to strengthen the engagement of the donor community and the private sector in the Central America Clean Energy Corridor	- Increased uptake of RE in the regional grid - Improved regulatory frameworks at the regional level to upscale RE generation and transmission in the region - Capacities developed in key areas to facilitate the intake of RE in the System - Regional planning processes include higher share of renewable power options	2014-2015
			Identify potential zones for concentrated renewable power development and links with the SIEPAC transmission corridor	- Identification and analysis of renewable power development zones and associated transmission corridors - Workshops to promote integrated resource planning of generation and transmission facilities in the Central American Electrical Interconnection			
			Build the capacity of power pools, utilities and regulators to plan and operate grids with a diversified mix of renewable power	- Capacity building workshops to help power pools assess the options for renewable power development zones - Capacity building workshops to help transmission utilities in Central America operate power grids with a diversified mix of renewable power plants			
Emerging Regional Clean Energy Corridors	Effective regional frameworks of cooperation to increase the share of renewables in power grids	CSP KPFC	Support Southeast Asian countries to exploit renewable resources in the region through the on-going integration of the ASEAN Power Grid	- Reports on gaps and opportunities for renewable power development in Southeast Asia, Middle East and North Africa, and Central Asia - Three regional workshops to develop work plans to support the integration of renewable energy options into the grid, with power pools, utilities, regulators and other stakeholders	- Workshops and outreach activities to strengthen the engagement in the Emerging Regional Clean Energy Corridors	- Endorsement of the Clean Energy Corridor Concept by countries and related regional entities - regional planning processes and national integrated resource plans includes higher share of renewable power options	2014-2015
			Launch a MENA Solar Bridge Initiative to focus on the wind and solar opportunities in the region and their effective integration in regional power grids				
			Support countries in South East Europe to investigate opportunities to develop renewable power options more efficiently through better planning and zoning				
			Assist countries in Central Asia to develop renewable electricity generation				

Component	Impact	Division	Activities	Deliverable (2014-2015)	Deliverable (subject to additional voluntary contributions)	Indicators of achievement	Timeframe
Empowering through partnerships	Enhanced knowledge and skills to design and implement renewable energy policies and projects	CSP	Build an active interface, in different renewable energy technologies, between countries, to share experiences and know-how to overcome barriers and attract investments	- Identification of 2 training institutions/organisations in member countries to deliver targeted trainings in partnership with IRENA - 2 practical training sessions for technicians for early stages of the supply chain	- Identification of additional training institutions/organisations in member countries to deliver targeted trainings in partnership with IRENA - Additional practical training sessions for technicians for early stages of the supply chain	- 150 participants trained in various aspects of RE development - policy, finance, technical - 2 Research or University institutions develop courses or curriculum in geothermal - 30 trainees for technical geothermal complete training	2014-2015
			Solicit expertise from its Member States, training institutions and development partners to provide training programmes responding to needs identified through RRAs, and regional initiatives				
			Develop capacities of key stakeholders to design and implement legal and regulatory frameworks for geothermal deployment	Technical assistance in geothermal law and regulations in Latin America and Caribbean, Asia and Africa			
			Form a global IRENA Resource Network that supports various renewable energy projects in their countries		Enhancement of curriculum for renewable energy in collaboration with expert institutions		

2014-2015 Biennium Budget Proposal

Table 1: 2014-2015 Biennium resource requirements (in USD thousands)

	2013 Approved Annual Budget	2014 Proposed Budget	2015 Proposed Budget	2014-2015 Biennium Proposed Budget
Assessed Contributions (Core Budget)	**18,000**	**20,000**	**20,000**	**40,000**
Voluntary Contributions from the UAE:				
Operations	2,900	2,900	2,900	5,800
Research	2,900	2,900	2,900	5,800
Governing Body Meetings	1,600	1,600	1,600	3,200
Subtotal UAE Contributions	**7,400**	**7,400**	**7,400**	**14,800**
Voluntary Contributions from Germany:				
Innovation and Technology	4,300	4,500	4,700	9,200
Subtotal Germany Contributions	**4,300**	**4,500**	**4,700**	**9,200**
Total Voluntary Contributions	**11,700**	**11,900**	**12,100**	**24,000**
Grand Total	**29,700**	**31,900**	**32,100**	**64,000**

Table 2: 2014-2015 Biennium resource requirements by Thematic Area (in USD thousands)

Division/Thematic Area	Combined Core and Voluntary Contributions	Proportion of Total
A. Strategic Management and Executive Direction	12,270	19%
Governing Body Meetings	3,200	5%
Subtotal	**15,470**	**24%**
B. Thematic Programme Area		
Planning for the global energy transition	10,816	17%
Gateway to knowledge on renewable energy	7,624	12%
Enabling investment and growth	8,252	13%
Renewable energy access for sustainable livelihoods	3,393	5%
Islands: lighthouses for renewable energy deployment	2,972	5%
Regional action agenda	4,244	7%
Subtotal	**37,301**	**59%**
C. Administration and Management Services	**11,229**	**17%**
Total Estimated Requirements	**64,000**	**100%**

Table 3: 2014-2015 Biennium post requirements

Level	Approved 2013	Proposed 2014-2015	Increase
ASG	1	1	-
D-2	1	1	-
D-1	4	5	1
P-5	17	17	-
P-3/4	33	38	5
P-2/1	2	3	1
Sub-total Professional and above	*58*	*65*	*7*
General Services	**23**	**24**	1
Total	**81**	**89**	**8**

Table 4: 2014-2015 Biennium Budget resource requirements by object of expenditure
(in USD thousands)

Object of Expenditure	Core Budget	Voluntary Contributions	Total	Proportion of Total
Total Staff Costs	**28,485**	**4,730**	**33,215**	**52%**
Total Non-Staff Costs	**11,515**	**19,270**	**30,785**	**48%**
- Consultants, Interns, Project & Seconded Personnel	6,227	4,506	10,733	17%
- Programme and Expert Meetings	2,003	6,527	8,530	13%
- Travel of Staff	489	1,177	1,666	3%
- Contractual Services	2,218	4,756	6,974	11%
- General Operating Expenses	518	2,304	2,822	4%
- Furniture and Equipment	60	-	60	0%[15]
Total	**40,000**	**24,000**	**64,000**	**100%**

[15] Proportion is less than 1%.

105. **Strategic Management and Executive Direction (SMED)** provides direct and immediate support to the Director-General in the execution of his strategic and management responsibilities. A Deputy Director-General supports the Director-General in programme design, formulation and implementation and the coordination between programmatic divisions and service areas, including through the PMO. SMED also comprises the Governance Support Office responsible for the Agency's governing body meetings and the Agency's engagement with Members and the Communications and Outreach Unit which coordinates the Agency's communication activities. An internal audit function ensures that internal control and risk management measures are in place and the Legal Advisor provides legal support to the Director-General and the Agency. The liaison presence in New York supports IRENA's collaboration with the UN system organisations, global initiatives, partners and other US-based stakeholders.

Resource Requirements: Strategic Management and Executive Direction

	Resources (in USD thousands)
Core Budget	9,910
Voluntary Contributions	5,560
Total Requirements	**15,470**

Category	**Resources (in USD thousands)**	**Posts**
	2014-2015 Biennium Estimate	2014-2015 Biennium
Core Budget Post	8,608	22
Core Budget Non-post	1,302	-
Voluntary Contributions		-
UAE Government Bid	5,560	-
Total	**15,470**	**22**

Object of Expenditure	**2014-2015 Biennium Estimate (in USD thousands)**
Total Staff Costs	**8,608**
Total Non-Staff Costs	**6,862**
- Consultants, Interns, Project & Seconded Personnel	666
- Programme and Expert Meetings	4,057
- Travel of Staff	536
- Contractual Services	1,073
- General Operating Expenses	530
- Furniture and Equipment	-
Total	**15,470**

106. **The Knowledge, Policy and Finance Centre (KPFC)** is IRENA's central knowledge repository and a centre of excellence for renewables policy and finance issues. KPFC collects and analyses data and assesses policies, with a focus on finance and socio-economic and environmental aspects, to enable IRENA to be the advisory resource for its Members, and to disseminate information to the public. It is a central repository of IRENA's internal knowledge to support the work of all divisions and provide critical knowledge products to IRENA's Members. KPFC also coordinates IRENA's engagement with the private sector and civil society, as well as the institutional publication development.

Resource Requirements: Knowledge, Policy and Finance Centre

	Resources (in USD thousands)
Core Budget	11,606
Voluntary Contributions	3,000
Total Requirements	**14,606**

Category	**Resources (in USD thousands)**	**Posts**
	2014-2015 Biennium Estimate	2014-2015 Biennium
Core Budget Post	5,593	14
Core Budget Non-post	6,013	-
Voluntary Contributions		
UAE Government Bid	3,000	-
Total	**14,606**	**14**

Object of Expenditure	**2014-2015 Biennium Estimate (in USD thousands)**
Total Staff Costs	**5,593**
Total Non-Staff Costs	**9,013**
- Consultants, Interns, Project & Seconded Personnel	5,663
- Programme and Expert Meetings	1,001
- Travel of Staff	196
- Contractual Services	1,761
- General Operating Expenses	392
- Furniture and Equipment	-
Total	**14,606**

107. **IRENA Innovation and Technology Centre (IITC)** provides cutting-edge information on renewable energy technology and innovation, and seeks new pathways for transition to a sustainable energy future. It is an objective and authoritative source of information and advice on renewables costs and cost trends, technology options, mid- and long-term objectives and roadmaps for achieving them. IITC, as a centre of excellence for renewable energy technology and innovation, stays abreast of the latest developments. It translates them into practical, policy-friendly tools to help IRENA's Members adopt renewable technologies, and to use innovation policy to accelerate change and transition to energy systems based predominantly on renewables. IITC is based in Bonn, Germany.

Resource Requirements: IRENA Innovation and Technology Centre

	Resources (in USD thousands)
Core Budget	-
Voluntary Contributions	9,200
Total Requirements	**9,200**

Category	**Resources (in USD thousands)**	**Posts**
	2014-2015 Biennium Estimate	2014-2015 Biennium
Post	4,730	13
Non-Post	4,470	-
Total	**9,200**	**13**

Object of Expenditure	**2014-2015 Biennium Estimate (in USD thousands)**
Total Staff Costs	**4,730**
Total Non-Staff Costs	**4,470**
- Consultants, Interns, Project & Seconded Personnel	1,160
- Programme and Expert Meetings	1,328
- Travel of Staff	500
- Contractual Services	904
- General Operating Expenses	578
- Furniture and Equipment	-
Total	**9,200**

108. **The Country Support and Partnerships (CSP)** division supports countries in the development and implementation of national and regional renewable energy strategies. It complements the analytical and knowledge work being done by KPFC and IITC, and engages with countries and other partners to translate it into concrete actions. Upon request, CSP assists countries with their Renewables Readiness Assessments (RRAs), advises on follow-up actions and supports key capacity-building efforts using effective needs assessment processes. It is a network hub for cooperation between countries, regions, organisations and institutions. CSP activities enable a systematic overview of country and regional needs, experiences and trends to help facilitate cross-pollination of best practices between countries and regions, and shape IRENA's future programmatic priorities.

Resource Requirements: Country Support and Partnerships

	Resources (in USD thousands)
Core Budget	9,495
Voluntary Contributions	4,000
Total Requirements	**13,495**

Category	**Resources (in USD thousands)**	**Posts**
	2014-2015 Biennium Estimate	2014-2015 Biennium
Core Budget Post	6,102	15
Core Budget Non-post	3,393	-
Voluntary Contributions		
UAE Government Bid	4,000	-
Total	**13,495**	**15**

Object of Expenditure	**2014-2015 Biennium Estimate (in USD thousands)**
Total Staff Costs	**6,102**
Total Non-Staff Costs	**7,393**
- Consultants, Interns, Project & Seconded Personnel	2,260
- Programme and Expert Meetings	2,144
- Travel of Staff	320
- Contractual Services	2,317
- General Operating Expenses	352
- Furniture and Equipment	-
Total	**13,495**

109. **The Division for Administration and Management Services (AMS)** provides IRENA with administration and management services in support of implementing the Agency's mandate. The core objectives and responsibilities of the Division are to ensure that the Agency has the necessary infrastructural, human, finance and technical assets in place. The Division is also responsible for improving management practices throughout the Agency and for promoting accountability and management evaluation with the aim of improving work processes and procedures.

Resource Requirements: Administration and Management Services

	Resources (in USD thousands)
Core Budget	8,989
Voluntary Contributions	2,240
Total Requirements	**11,229**

Category	**Resources (in USD thousands)**	**Posts**
	2014-2015 Biennium Estimate	2014-2015 Biennium
Core Budget Post	8,182	25
Core Budget Non-post	807	-
Voluntary Contributions		
UAE Government Bid	2,240	-
Total	**11,229**	**25**

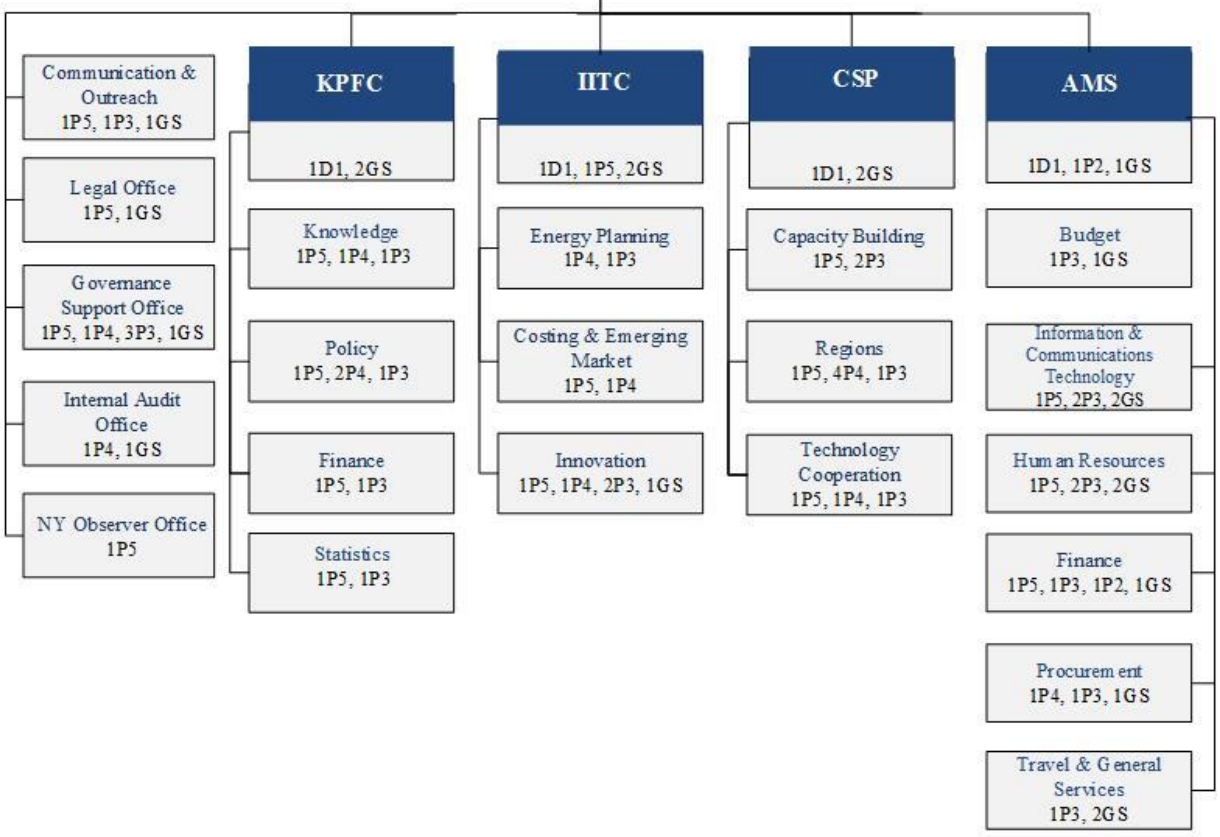
Object of Expenditure	**2014-2015 Biennium Estimate (in USD thousands)**
Total Staff Costs	**8,182**
Total Non-Staff Costs	**3,047**
- Consultants, Interns, Project & Seconded Personnel	984
- Programme and Expert Meetings	-
- Travel of Staff	114
- Contractual Services	919
- General Operating Expenses	970
- Furniture and Equipment	60
Total	**11,229**

Annex 1: IRENA Organisational Chart

IRENA Organisational Structure and Post Distribution for 2014 – 2015 Biennium

Summary of Posts

Posts	No.
ASG	1
D-2	1
D-1	5
P-5	17
P-4	15
P-3	23
P-2/1	3
GS	24
Total	89



Annex II: Indicative IRENA Scale of Contributions for 2014

Members	UN Factor	Indicative IRENA Adjusted Scale of Assessment 2014 (%) *	Approved Assessed Contribution to IRENA 2013 (USD)	Indicative Assessed Contribution to IRENA 2014 (USD)	Variance (USD)
Albania	0.010	0.012%	2,106	2,340	234
Algeria	0.137	0.165%	28,080	32,175	4,095
Angola***	0.010	0.010%	1,755	1,950	195
Antigua and Barbuda	0.002	0.002%	351	390	39
Argentina**	0.432	0.521%		101,595	101,595
Armenia	0.007	0.008%	1,053	1,560	507
Australia	2.074	2.499%	424,184	487,305	63,121
Bahrain	0.039	0.047%	8,600	9,165	565
Bangladesh***	0.010	0.010%	1,755	1,950	195
Belarus	0.056	0.068%	9,301	13,260	3,959
Belgium** [1]	0.998	1.202%		234,390	234,390
Belize**	0.001	0.001%		195	195
Benin	0.003	0.004%	702	780	78
Bosnia and Herzegovina	0.017	0.021%	2,984	4,095	1,111
Brunei Darussalam	0.026	0.031%	6,143	6,045	(98)
Bulgaria	0.047	0.057%	8,424	11,115	2,691
Burkina Faso**	0.003	0.004%		780	780
Cameroon	0.012	0.015%	2,457	2,925	468
Cabo Verde	0.001	0.001%	175	195	20
China** [2]	5.148	5.645%		1,100,775	1,100,775
Côte D'Ivoire**	0.011	0.013%		2,535	2,535
Croatia	0.126	0.152%	21,236	29,640	8,404
Cuba	0.069	0.083%	15,620	16,185	565
Cyprus	0.047	0.057%	10,179	11,115	936
Czech Republic	0.386	0.465%	76,518	90,675	14,157
Denmark	0.675	0.813%	161,460	158,535	(2,925)
Djibouti	0.001	0.001%	175	195	20
Dominican Republic	0.045	0.054%	9,301	10,530	1,229
Ecuador	0.044	0.053%	8,775	10,335	1,560
Egypt	0.134	0.161%	20,709	31,395	10,686

[1] Belgium deposited its Instrument of Accession to the Statute on 17 December 2013, and will be a Member of the Agency as of 16 January 2014. Belgium has officially requested to be included in the scale of assessment for the full year of 2014.

[2] China deposited its Instrument of Accession to the IRENA Statute on 3 December 2013, and will be a Member of the Agency as of 2 January 2014.

Members	UN Factor	Indicative IRENA Adjusted Scale of Assessment 2014 (%) *	Approved Assessed Contribution to IRENA 2013 (USD)	Indicative Assessed Contribution to IRENA 2014 (USD)	Variance (USD)
Eritrea	0.001	0.001%	175	195	20
Estonia	0.040	0.048%	8,775	9,360	585
Ethiopia***	0.010	0.010%	1,755	1,950	195
Fiji	0.003	0.004%	877	780	(97)
Finland	0.519	0.625%	124,254	121,875	(2,379)
France	5.593	6.739%	1,343,628	1,314,105	(29,523)
Gambia	0.001	0.001%	175	195	20
Georgia	0.007	0.008%	1,404	1,560	156
Germany	7.141	8.604%	1,759,563	1,677,780	(81,783)
Greece	0.638	0.769%	151,632	149,955	(1,677)
Grenada	0.001	0.001%	175	195	20
Iceland	0.027	0.033%	9,301	6,435	(2,866)
India	0.666	0.802%	117,234	156,390	39,156
Iran**	0.356	0.429%		83,655	83,655
Iraq	0.068	0.082%	4,388	15,990	11,602
Israel	0.396	0.477%	84,240	93,015	8,775
Italy	4.448	5.359%	1,097,051	1,045,005	(52,046)
Japan	10.833	13.052%	2,749,559	2,545,140	(204,419)
Kazakhstan**	0.121	0.146%		28,470	28,470
Kenya	0.013	0.016%	2,633	3,120	487
Kiribati**	0.001	0.001%		195	195
Latvia	0.047	0.057%	8,424	11,115	2,691
Lesotho	0.001	0.001%	175	195	20
Liechtenstein	0.009	0.011%	1,931	2,145	214
Lithuania	0.073	0.088%	14,216	17,160	2,944
Luxembourg	0.081	0.098%	19,831	19,110	(721)
Malaysia	0.281	0.339%	55,458	66,105	10,647
Maldives	0.001	0.001%	175	195	20
Mali	0.004	0.005%	702	975	273
Malta	0.016	0.019%	3,686	3,705	19
Marshall Islands	0.001	0.001%	175	195	20
Mauritania	0.002	0.002%	175	390	215
Mauritius	0.013	0.016%	2,457	3,120	663
Mexico	1.842	2.219%	517,023	432,705	(84,318)
Monaco	0.012	0.014%	702	2,730	2,028
Mongolia	0.003	0.004%	351	780	429
Montenegro	0.005	0.006%	877	1,170	293

Mozambique	0.003	0.004%	702	780	78
Namibia**	0.010	0.012%		2,340	2,340
Nauru	0.001	0.001%	175	195	20
Netherlands	1.654	1.993%	406,985	388,635	(18,350)
New Zealand	0.253	0.305%	59,846	59,475	(371)
Nicaragua	0.003	0.004%	702	780	78
Niger	0.002	0.002%	351	390	39
Nigeria	0.090	0.108%	17,199	21,060	3,861
Norway	0.851	1.025%	191,120	199,875	8,755
Oman	0.102	0.123%	18,954	23,985	5,031
Pakistan**	0.085	0.102%		19,890	19,890
Palau	0.001	0.001%	175	195	20
Panama	0.026	0.031%	4,914	6,045	1,131
Peru**	0.117	0.141%		27,495	27,495
Philippines	0.154	0.186%	19,831	36,270	16,439
Poland	0.921	1.110%	181,643	216,450	34,807
Portugal	0.474	0.571%	112,145	111,345	(800)
Qatar	0.209	0.252%	29,660	49,140	19,480
Republic of Korea	1.994	2.402%	495,963	468,390	(27,573)
Republic of Moldova	0.003	0.004%	351	780	429
Romania	0.226	0.272%	38,786	53,040	14,254
Rwanda	0.002	0.002%	175	390	215
Saint Kitts and Nevis**	0.001	0.001%		195	195
Saint Vincent and the Grenadines	0.001	0.001%	175	195	20
Samoa	0.001	0.001%	175	195	20
Saudi Arabia	0.864	1.041%	182,169	202,995	20,826
Senegal	0.006	0.007%	1,404	1,365	(39)
Serbia	0.040	0.048%	8,073	9,360	1,287
Seychelles	0.001	0.001%	351	195	(156)
Sierra Leone	0.001	0.001%	175	195	20
Singapore**	0.384	0.463%		90,285	90,285
Slovakia	0.171	0.206%	31,239	40,170	8,931
Slovenia	0.100	0.121%	22,640	23,595	955
Solomon Islands**	0.001	0.001%		195	195
Somalia**	0.001	0.001%		195	195
South Africa	0.372	0.448%	84,416	87,360	2,944
Spain	2.973	3.582%	697,086	698,490	1,404
Sri Lanka	0.025	0.030%	4,212	5,850	1,638

Sudan***	0.010	0.010%	1,755	1,950	195
Swaziland	0.003	0.004%	702	780	78
Sweden	0.960	1.157%	233,415	225,615	(7,800)
Switzerland	1.047	1.261%	247,982	245,895	(2,087)
The former Yugoslav Republic of Macedonia	0.008	0.010%	1,579	1,950	371
Togo	0.001	0.001%	175	195	20
Tonga	0.001	0.001%	175	195	20
Tunisia	0.036	0.043%	6,669	8,385	1,716
Turkey	1.328	1.600%	135,311	312,000	176,689
Tuvalu**	0.001	0.001%		195	195
Uganda	0.006	0.007%	1,404	1,365	(39)
United Arab Emirates	0.595	0.717%	85,820	139,815	53,995
United Kingdom of Great Britain and Northern Ireland	5.179	6.240%	1,449,279	1,216,800	(232,479)
United States of America [1]	22.000	22.000%	3,861,000	4,290,000	429,000
Uruguay	0.052	0.063%	5,967	12,285	6,318
Vanuatu**	0.001	0.001%		195	195
Yemen***	0.010	0.010%	1,755	1,950	195
Zambia**	0.006	0.007%		1,365	1,365
Total Assessment from State Members of IRENA			**17,550,000**	**19,500,000**	**1,950,000**
European Union [2]		2.50%	450,000	500,000	50,000
Overall Core Budget			**18,000,000**	**20,000,000**	**2,000,000**

[1] A maximum assessment rate is established at 22 percent.

[2] As of 2012, the European Union has committed to paying an annual contribution at the fixed rate of 2.5% of the overall Core Budget.

* Pursuant to Article XII of the IRENA Statute, mandatory contributions of Members shall be based on the scale of assessments of the United Nations, as determined by the Assembly. At its third session, the Assembly decided to base the 2014-2015 biennium Work Programme and Budget of the Agency on the scale of assessments adopted by the UN General Assembly (A/RES/67/238) for the period 2013-2015, to be adjusted as appropriate based on the IRENA membership (A/3/SR.L.1).** States that became Members of IRENA after the adoption of the 2013 Work Programme and Budget on 14 January 2013.

*** For Least Developed Countries (LDC), a maximum assessment rate is established at 0.01 percent.

Annex III: Entities Cooperating with IRENA

Institution	Acronym	Planning for the Global Energy Transition	Gateway to knowledge on RE	Enabling investment and growth	RE access for sustainable livelihoods	Islands: lighthouses for RE deployment	Regional action agenda
3TIER			x				
Abu Dhabi Fund for Development, United Arab Emirates	ADFD			x			
African Development Bank	AfDB	x					x
African Energy Commission	AFREC		x				
African Union	AU	x					x
Agence Nationale pour la Maîtrise de l'Energie, Tunisia	ANME		x				
Alliance for Rural Electrification	ARE			x	x		x
American Council on Renewable Energy	ACORE		x				
APEC Expert Group on New and Renewable Energy	EGNRET						x
Arab Union of Electricity							x
Arizona State University, USA			x				x
Asian Development Bank	ADB	x	x	x			x
Asia-Pacific Energy Research Centre	APERC						x
Association of Power Utilities of Africa	APUA	x					
Ben-Gurion University of the Negev			x				
Birdlife International			x				
Bloomberg New Energy Finance	BNEF			x			
Brunei National Energy Research Institute	BNERI						x
Bureau of Resources and Energy Economics, Australia	BREE		x				
Canadian GeoExchange Coalition			x				
Caribbean Community Secretariat	CARICOM	x				X	
Center for Wind Energy Technology	CWET		x				
Central African Power Pool	CAPP	x					
Central American Integration System	SICA						x
Center for RE Sources and Energy Efficiency, Greece	CRES		x				
Centre for Energy, Environment and Technology, Spain	CIEMAT		x	x			
Centre for Science and Environment, India	CSE		x				
China National Renewable Energy Centre	CNREC	x					
Chinese Renewable Energy Industries Association	CREIA		x				
Chinese Renewable Energy Institute	CREEI		x				
Clean Energy Ministerial	CEM		x	x			
Clean Energy Solutions Center			x				
Convention on Migratory Species	CMS		x				
Council for Scientific and Industrial Research	CSIR		x				
Danish Energy Agency	ENS	x					
Danish Technical University	DTU		x				
Deutsche WindGuard, Germany			x	x			
Deutsches Biomasseforschungszentrum	DBFZ		x				
Earth Institute, Columbia University, USA							x
East Africa Community	EAC	x					x
East African Industrial Research Board	EAIRB						x

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Eastern Africa Power Pool	EAPP	x					x
Economic and Technological Development Distance Learning Centre Foundation, Spain	CEDDET		x				
Economic Community of Central African States	ECCAS						x
Economic Research Institute for ASEAN and East Asia	ERIA						x
ECOWAS Centre for Renewable Energy and Energy Efficiency	ECREEE	x	x	x			x
ECOWAS Regional Electricity Regulatory Authority	ERERA						x
Enel Foundation, Italy				x			
Enel Green Power			x				
Energy Commission, Nigeria		x					
Energy Community Secretariat							x
Energy Modeling Forum	EMF	x					
Energy Research Centre of the Netherlands	ECN		x				
Energy Research Centre - University of Cape Town, South Africa	ERC-UCT	x					
Energy Sector Management Assistance Program	ESMAP	x	x				x
EU-Africa Trust Fund							x
EUEI Partnership Dialogue Facility	EUEI PDF	x					x
European Bank for Reconstruction and Development	EBRD			x			
European Commission			x	x			
European Energy Centre	EEC		x				
European Geothermal Energy Council	EGEC		x				
European Investment Bank	EIB			x			x
European Organization for Nuclear Research	CERN	x					
European Photovoltaic Industry Association	EPIA		x	x			
European Renewable Energy Council	EREC		x				
European Solar Thermal Electricity Association	ESTELA		x	x			
European Solar Thermal Industry Federation	ESTIF			x			
Food and Agriculture Organization	FAO		x		x		
Fraunhofer Institute for Solar Energy Systems, Germany	ISE	x		x			
GeoModel Solar, Slovakia			x				
Geoscience Australia	GA		x				
Geothermal Institute, University of Auckland, New Zealand							x
German Aerospace Center	DLR	x	x				
German Development Bank	KfW		x				
German Development Institute	DIE			x			
German Metrology Institute	PTB			x			
German Renewable Energies Agency	AEE		x				
Germanischer Lloyd / Garrad Hassan			x				
Gesellschaft für Internationale Zusammenarbeit, Germany	GIZ	x	x	x		x	x
Gestore dei Servizi Energetici, Italy	GSE	x	x				
Global Sustainable Energy Solutions	GSES					x	
Global Village Energy Partnership	GVEP Int.						x

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Global Wind Energy Council	GWEC		x				
Green Climate Fund	GCF			x			
Greenpeace International			x				
Gulf Cooperation Council	GCC						x
Heads of ASEAN Power Utilities/Authorities	HAPUA						x
ICLEI - Local Governments for Sustainability	ICLEI			x			x
Indonesian Institute of Sciences			x				
Institute for Diversification and Saving of Energy, Spain	IDAE		x	x			
Institute of Economic Structures Research, Germany	GWS			x			
Institute of Electrical and Electronics Engineers	IEEE			x			
Institute of Energy Economics, Japan	IEEJ	x		x			
Instituto de Investigationes Electricas, Mexico	IIE		x				
Inter-American Development Bank	IDB		x				x
International Electrotechnical Commission	IEC	x					
International Energy Agency	IEA	x	x	x			
International Energy Agency, Energy Technology Systems Analysis Program	IEA-ETSAP	x					
International Energy Agency, RE Technology Deployment	IEA-RETD	x		x			
International Energy Workshop	IEW	x					
International Finance Corporation	IFC			x			
International Geothermal Association	IGA		x	x			x
International Hydropower Association	IHA		x				
International Institute for Water and Environmental Engineering	2iE			x			
International Monetary Fund	IMF			x			
International Organization for Standardization	ISO	x					
International Partnership for Energy Efficiency Cooperation	IPEEC					x	
International Solar Energy Society	ISES		x	x			
International Union for Conservation of Nature	IUCN					x	
Islamic Development Bank	IsDB						x
Japan International Cooperation Agency	JICA					x	
Japan International Research Center For Agricultural Sciences	JIRCAS		x				
Japan Renewable Energy Foundation	JREF		x				
Joint Research Centre, European Union	JRC		x	x			
King Abdullah City for Atomic and Renewable Energy, Saudi Arabia	K.A.CARE		x				
Korea Energy Economics Institute	KEEI	x					
Kuwait Institute for Scientific Research	KISR		x				
Kwame Nkrumah University of Science and Technology, Ghana	KNUST			x			
Latin American Energy Organization	OLADE	x	x				x
Lawrence Berkeley National Laboratories, USA	LBNL						x
League of Arab States							x
Leonardo Energy initiative			x				

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Masdar Institute, United Arab Emirates		x	x				
Mines Paristech, France			x				
National Energy Authority, Iceland	NEA						x
National Institute of Water and Atmospheric Research, New Zealand	NIWA		x				
National Renewable Energy Centre, Spain	CENER		x				
National Renewable Energy Laboratory, USA	NREL	x	x	x			
National Research Center, Spain	CNR		x				
Centre National d'Energie Solaire et des Energies Renouvelables, Mali	CNESOLER		x				
New and Renewable Energy Authority, Egypt	NREA		x	x			
New Energy and Industrial Technology Development Organization, Japan	NEDO	x				x	x
OPEC Fund for International Development	OFID						x
Open Geospatial Consortium	OGC		x				
Organisation for Economic Co-operation and Development	OECD			x			
Pacific Islands Forum	PIF					x	
Pacific Power Association	PPA	x				x	
Partners for Euro-African Green Energy	PANGEA		x				
Practical Action			x				
Prognos			x	x			
Qatar Energy and Environment Research Institute	QEERI	x					
Qatar National Food Security Programme	QNFSP		x				
Regional Center for Renewable Energy and Energy Efficiency	RCREEE		x	x			x
Regional Electricity Regulators Association, Southern African Development Community	RERA						x
Renewable Energy & Energy Efficiency Partnership	REEEP		x				
Renewable Energy and Energy Efficiency Institute/Polytechnic, Namibia	REEEI		x				
Renewable Energy Policy Network for the 21st Century	REN21		x	x			
Renewable Energy Solutions for the Mediterranean	RES4MED	x		x			
Renewables Academy, Germany	RENAC						
Ricerce sul Sistema Energetico, Italy	RSE		x				
Rocky Mountain Institute			x				
Royal Institute of Technology, Sweden	KTH	x					
Sander+Partner, Germany			x				
School for Industrial Organisation, Spain	EOI			x			
SE4ALL Global Facilitation Team	GFT	x					
SE4ALL hub for Energy Efficiency		x					
Secretariat of the Pacific Community	SPC	x	x			x	
Secretariat of the Pacific Regional Environment Programme	SPREP					x	
SIDS-DOCK						x	

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South African National Energy Development Institute	SANEDI	x	x				
Southern African Development Community	SADC		x				
Southern African Power Pool	SAPP	x					x
State Agency on Energy Efficiency and Energy Saving, Ukraine	SAEE	x					
Sustainable Energy Industry Association of the Pacific Islands	SEIAPI					x	
Tellus Institute			x				
Texas A&M University, Qatar	TAMU	x					
The Energy and Resources Institute, India	TERI	x		x			
The New Partnership for Africa's Development	NEPAD						x
Think Geoenergy			x				
UN Habitat							x
United Kingdom Energy Research Centre, United Kingdom	UKERC			x			
United Nations	UN	x	x		x	x	
United Nations Development Programme	UNDP	x	x	x			x
United Nations Economic and Social Commission for Western Africa	UN ESCWA						x
United Nations Economic Commission for Europe	UNECE	x					
United Nations Environment Programme	UNEP		x	x			x
United Nations Foundation			x				
United Nations Framework Convention on Climate Change	UNFCCC			x			
United Nations High Commissioner for Refugees	UNHCR			x			
United Nations Industrial Development Organization	UNIDO	x		x			
United Nations Statistics Division	UNSD		x				
United Nations University	UNU						x
Universidad de Chile			x				
University of Seychelles			x				
University of South Pacific	USP					x	
University of Swaziland	UNISWA		x				
University of the Republic, Uruguay	UDELAR		x				
Vestas			x				
vortex			x				
West African Power Pool	WAPP	x					x
Western Balkans Investment Facility	WBIF						x
Wind Atlas of South Africa	WASA		x				
World Bank Group		x	x	x			
World Future Council	WFC		x				
World Intellectual Property Organization	WIPO			x			
World Meteorological Organization	WMO		x				
World Resources Institute	WRI		x				
World Wildlife Fund	WWF		x				x
World Wind Energy Association	WWEA		x	x			
York University, Faculty of Environmental Studies, Canada	SEI		x				