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Medium-term Strategy of IRENA

Report of the Director-General

I. Introduction

1. Since the concept of IRENA and its original mission were first conceived, there has been significant worldwide progress made in the development and deployment of renewable energy technologies. For example, wind and solar have become mainstream technologies joining hydro as major contributors to the energy mix. The share of ethanol and biodiesel in the transportation fuel mix continues to rise with new innovations in second generation biofuels. Emerging and developing economies are already playing an increasingly significant role – both in installing new renewable energy capacity and in building their own technical competencies and are posed to be the growth markets of the future. Low-income communities in rural areas in developing countries can now take advantage of renewable energy systems, particularly solar systems that provide access to decentralised energy at an affordable price demonstrating the importance of renewable energy to energy access. While the technology is available, its deployment is still massively constrained by barriers that include a lack of finance, business models and appropriate local regulatory systems and enabling policy frameworks.
2. As of 2012, well over 100 countries have set ambitious targets for their own renewable energy future, many striving for a doubling of renewables in the energy mix by 2030. There are many different approaches to reach these renewable energy targets (e.g., different regulatory frameworks, pathways with different ambitions). However, there are still a set of technical and non-technical barriers inhibiting significant deployment (e.g., challenges with new technologies such as offshore wind, grid infrastructure or lack of public knowledge and support, etc.). Governments therefore require a current and detailed knowledge base and best practice examples on how to shift to an energy mix with a large scale deployment of renewables. All actors, private sector, civil society and government must work together in this coming transition.

Key Renewable Energy Opportunity Areas

3. In recent years, we have witnessed protracted economic crises accompanied by both market and price volatility. The economic and market conditions which continue to drive up food and energy prices are generating more attention towards the importance of energy: its impact on growth; on distribution issues to access; its impact on macroeconomic stability as a result of price volatility and energy security concerns; and, of course, the link between energy mix and climate change. In this setting, the challenge of providing access to modern energy services to those millions suffering energy poverty is of particular significance. Against this growing sense of urgency, renewable energy has become an essential part of the solution.

Energy issues are at the forefront of political discourse in a growing number of countries

4. Countries that have set ambitious targets for their own renewable energy future are striving for a dramatically increased share of renewables in the energy mix. Additionally, dedicated “delivery agencies” are being set up with the specific purpose of pushing the introduction and use of renewable energy to the next level. 2012, the International Year of Sustainable Energy for All, and the Earth Summit Rio+20, and the UN Secretary-General’s ‘Sustainable Energy for All’ initiative provided an important opportunity for IRENA to position itself globally as a key promoter of renewable energy. As a key participant in this process, IRENA is positioned to play a role as the “renewables hub” for the initiative.

There is a growing consensus that renewable energy can help generate new economic opportunities, including job creation

5. Over 5 million people worldwide were employed, either directly or indirectly, in renewable energy industries in 2011. With renewable energy now having a larger share in the overall energy mix, impact on countries’ GDP and job creation is likely to increase further – and many activities related to renewable energy are going to have a higher share of local value creation (e.g., service and maintenance), thus increasing its economic significance.

Renewable energy has the potential to leapfrog conventional technologies and empower the “energy poor”

6. Today almost one-and-a-half billion people still lack access to electricity. In addition, more than three billion low-income consumers in developing countries continue to rely on the traditional use of biomass and fossil fuels for cooking, heating and lighting – often with detrimental consequences on their health and the environment. A growing number of examples from developing countries are starting to illustrate how renewable energy solutions could provide the energy poor with access to clean energy at an affordable price.

Advances in renewable technologies are driving costs down

7. The point of grid parity has already been achieved for certain technologies and applications in many countries and technology development and capacity growth triggered by increasing targets for renewable deployment will continue to drive costs down. In 2009, for the first time, almost 50% of the total additional installed power capacity was from renewable energy sources and growth in the sector continues despite global economic challenges.

Governments around the world are currently considering major investments in energy

8. As energy demand in emerging and developing economies surges, and as renewable energy technologies in electricity generation, including decentralised energy solutions become more and more competitive, the need for a neutral and reliable source of advice and support becomes compelling.

Strategic Considerations

9. Although there are diverse needs among IRENA's stakeholders, the key questions for all remain:
 - How could a country's resource potential best be evaluated?
 - What targets are realistic?
 - Which renewable technologies are the most promising in our circumstances?
 - Which regulatory frameworks would facilitate investment?
 - What do investors need to be attracted?

- How can a business case for renewable energy best be articulated in varying circumstances?
- What energy pricing framework is best for renewable energy?
- What are the true economic, societal and environmental benefits?
- What are the required capabilities for renewable technology operations and infrastructure?
- What are the right technology road maps for specific resource endowments?

10. IRENA's stakeholders have, *inter alia*, asked IRENA to:

- Provide access to accurate data and industry expertise (e.g., technology costs and performance metrics in different environments);
- Build in-country technical and institutional capabilities (e.g., in the field of resource mapping, data collection as well as renewable technology operations and maintenance skills);
- Share best-practices and provide a network for peer-to-peer learning (e.g., in terms of institutional arrangements, target setting, technology, innovation and regulations);
- Help undertake an assessment of the policy and regulatory environment and build the country-specific business case for renewable energy and technology deployment (e.g., which technologies to promote in a country's given socio-economic, and geophysical environment).

The foregoing provides the needs-based framework for the development of the IRENA medium-term strategy.

11. IRENA will reach out to relevant international initiatives and partner with governments, relevant international institutions, civil society, the private sector and other relevant partners to address these challenges and implement its medium-term strategy.

II. Vision for IRENA

12. Based on the overall vision of IRENA as outlined in its Statute, IRENA's mission for the medium-term is:

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.

IRENA's work must in this regard be guided by fundamental values that include:

- Responsive to and supportive of developed and developing countries needs
- Neutral among all RE technologies (bio-energy, geothermal, hydro-power, ocean energy, solar and wind)
- To develop a lean, nimble, responsive, inclusive and results-oriented institutional framework that is accountable and transparent, and provides support to all stakeholders in line with the decisions of its legislative bodies.

III. Strategic Direction and Objectives

13. From 2013-2017, IRENA will focus its efforts on delivering its mandate as outlined in its founding Statute through leadership along three key pillars. These pillars, all equally important, for IRENA to become an authoritative global voice for renewable energy by serving as a:

- Centre of excellence for renewable energy;
- Renewable energy advisory resource for countries;
- Network hub of country, regional and global programs.

A. Centre of excellence for renewable energy

14. IRENA's objective is to become centre of excellence for renewable energy, while providing a strong and consistent case for renewable energy as well as a comprehensive information

base for effective decision making. that is ambitious, creative, and original in being renewable energy resource for effective decision making.

15. Today, there is an abundance of information sources concerning renewable energy and technologies. In many cases, this information is useful but not easily accessible. In other instances, it is conflicting and, in some cases, inaccurate. For governments, investors, the public and industry stakeholders, this information overload makes it increasingly difficult to find out what the reliable facts about renewable energy and technologies are, sometimes to the point of slowing down renewable development activities.
16. IRENA's role will be to become a centre of excellence for existing and IRENA-originated information, focusing on resource assessment, technology costs and trajectory, social and economic benefits, regulatory frameworks implementation experiences, best practices, public private partnerships, finance and education and training opportunities. It will compile a coherent and comprehensive factual and analytical base for governments, all industry stakeholders and civil society and, where information is lacking, IRENA will build partnerships and/or seek to develop, where needed, the business case and the fact base itself (e.g. through its cooperation with technical institutions, the private sector and civil society).
17. In addition to compiling the analytical and policy advice as well as the fact base for renewable energy deployment, IRENA will use this position to organise and coordinate proactive communication around renewable energy and technologies to promote its benefits and dispel misconceptions.

Objectives

- To ensure the development of a basic set of resource maps at global, regional and national levels, which can assist countries to build their detailed resource maps as a basic reliable resource for investors and policy makers;
- To develop and promote effective methods and agreed upon standards for resource mapping which foster investment in and deployment of renewable technologies.

- To compile, and ensure easy access to, a comparable technology dataset. For each recognised technology, this dataset will include the fact base of current and historical costs for capital investment, technology deployment and maintenance, focused on various environments and regions; reliable power and performance parameters at various resource levels; and realistic success measurements of deployment;
- To study (where required), quantify and widely disseminate reliable information and facts on the positive economic and societal impact of renewable energy technology deployment (e.g., job creation, pollution abatement, sustainable natural resource management, health improvements and reduction of societal and environmental externalities);
- To develop a strategic communication plan for renewable energy and technology deployment. This could be based on an analysis from similar industries to understand best practice examples. It will include the dissemination of facts and figures which focus on societal, economic and environment benefits and impacts associated with the transition to renewable energy;
- To undertake a consultative process with all stakeholders, including the private sector and civil society, to develop the best form of communication and messaging tailored to mobilise and align the major renewable energy entities and stakeholders around the communications strategy.
- To develop an annual report on the trends, challenges and prospects for renewable energy deployment.

B. Renewable energy advisory resource for countries

18. IRENA's objective is to assist countries to strengthen their technical and institutional capacity, develop an enabling policy framework and their own business case for renewable energy deployment and to analyse existing financial instruments and their applicability to renewable energy investment strategies.

19. The renewable energy business case would need to highlight the opportunities and societal benefits of renewable energy technology deployment as well as the opportunity of removing investment risks along the renewable energy value chain.
20. A strategic case for renewable energy investment is required since, in the short-term, there is a perception that renewable technology deployment often "does not pay" relative to traditional energy sources. There is the need for a wider economic business case that identifies and quantifies the set of economic spill over and positive externalities associated with renewable energy technology deployment (relative to the baseline of traditional energy sources), whilst also engaging in an energy pricing debate. This business case would quantify the benefits of renewable energy technology deployment, inclusive of the environmental, economic and social benefits to countries, communities and individuals while also highlighting the return on capital for investors.
21. Along each step of the renewable energy value chain, there are significant potential barriers that can inhibit success and thereby block the deployment of renewable technologies. For example, a lack of resource mapping capabilities may prohibit a country from building the required resource maps, which form the basis to attract investment. The subsidies structure, regulatory frameworks or regulatory clearance processes may not be transparent or standardised, thus driving away investment. In some cases, the legislative needs for electrical grid requirements may not align with the needs of renewable technology (e.g., grid access requirements). Additionally, along-side renewable energy deployment, large scale grid and infrastructure modifications will be required to deploy renewable energy technologies at intense rates and uncertainty around these improvements could constitute investment risk.
22. Education and training opportunities in renewable energy are both limited and concentrated within the select few industrialised countries that possess comparatively well-developed renewable energy sectors. The demand for skilled renewable energy personnel in all countries however, still needs to be met. Worldwide, countries either have limited resources, or lack the capacity to design suitable renewable energy programmes. Existing programmes require improvement; entirely new ones need to be developed to keep pace with

technological advances; and prospective students should be made aware of the opportunities within this field.

23. IRENA's focus in the medium-term will be to advise countries concerning the establishment of an enabling policy environment and the development of indigenous capacity for the deployment of renewable energy technologies. Through partnerships and in-house capabilities and expertise, IRENA will provide advice and capacity building services to countries across each step of the renewable energy value chain. Given IRENA's limited resources, it will seek to deploy strategic support of external expertise and will build partnerships to bring in the expertise required to help individual countries with their unique value chain characteristics.
24. IRENA recognises that there is no "one size fits all" solution to the issues along each step of the renewable energy value chain. Additionally, it also recognises that developing countries have significant need for assistance and support, given their potential resource constraints.

Objectives

- To develop a comprehensive regional support framework for an enabling environment by:
 - Working with selected countries to actively undertake an assessment of their renewables readiness, facilitating their renewable energy deployment process, collaborating to build their business case for renewable energy across the entire renewable energy value chain;
 - Creating high-level roadmaps (steps-required), focusing on the steps required to reduce investment risk in that specific country, but supporting these countries run their process at a distance.
- To compile and create, when required, a set of tailored materials, which assist countries that are not part of the assessment programs, to build their in-country business cases for renewable energy deployment. These materials will focus on each step of the value chain and the specific steps and actions requiring country consideration, including both best and worst case examples.

- To provide targeted advice to governments on renewable energy roadmaps including technology information, research and development, energy infrastructure, target setting and indicators;
- To build the standardised set of contract terms alongside a set of generic, “recommended” templates and easy to use tools which countries and investors can use, with limited modifications, to create projects, contracts, terms and the investment case for renewable energy.
- To develop an authoritative and accessible capacity building and learning resource related to policy, technology, financing and investment for renewable energy for practitioners.
- To assist individual countries when requested with the relevant data and analyses in making technology choices.
- To develop country, sector and technology specific strategies for enhanced market formation, including the supply and demand dimensions.
- To help countries in their renewable energy innovation efforts, including in the development of standards, intellectual property rights, technology transfer and innovation policy formulation

C. Network hub of country, regional and global programs

25. IRENA’s objective is to support and facilitate Member and non-Member countries, agencies, programs and institutions responsible for deployment of renewable energy technologies.
26. It has become widely accepted that renewable energy deployment will only be able to go to scale with the assistance of a public-private partnership model. This is especially true of developing countries since much of the funding needs to be sourced from multi-lateral development finance institutions – to increase the level of additional private finance. Even in developed economies, there are now a range of public subsidies and risk mitigation instruments being utilised to foster appropriate levels of private finance. So far, no single entity or program is a recognised leader, but there is a clear need for a comprehensive overview of renewable policy and financial support mechanisms.

27. IRENA's role is to become the catalyst and accelerator in these newly forming country-level, regional and global entities and programs. IRENA will seek to understand the range of different programs and approaches; to accelerate the transfer of best-practices; and to assess the relative cost effectiveness of the different approaches. This latter point is critical to the achievement of significant renewable energy technology deployment at the lowest possible cost. Creating transparency around the real costs, including who bears what subsidy, is a critical step in building the business and financial case for renewable energy in specific circumstances and for specific technologies.

Objectives

- To profile, benchmark and seek to understand the range of programs and approaches, providing visibility on individual country practices and associated risks, as well as best practices across regional and global programs, thereby accelerating transfer of best-practices;
- To create knowledge and visibility on the performance of country-level outcomes (e.g. level of renewable energy technology deployment) based on the different country approaches and indicators (e.g. effectiveness, cost-efficiency, transparency and simplicity in implementation);
- To develop targeted advice at a country-level, including for the rational allocation of public funding for renewable energy deployment and country-specific market studies;
- To develop a comprehensive inventory of best practices in the mobilisation of private and public finance and to provide advisory services on public private partnerships and an information and data resource for private sector investment and public support to renewables;
- To develop a unique platform for the renewable energy industry representatives to provide the private sector perspective in IRENA activities and assist in the iteration of the "business case" for renewable energy.
- To provide an inclusive platform for all stakeholders including the different country entities, program and approach leaders, and public and private sector actors, on a regular

basis, to foster capacity building through exchange of information, targeted learning and knowledge sharing. This will occur both in and across regions.

- To develop a network of collaborating centres of excellence across all regions to identify best practice and solutions, and create an “expertise bank” of qualified manpower existing in national and regional institutions;
- To facilitate the convergence of the efforts of international organisations and bilateral aid programmes, in order to reduce duplication and redundancies, avoid a piecemeal approach of support and enable the deployment of comprehensive and integrated strategies wherever relevant.

IV. Monitoring and Evaluation Review of the Medium-term Strategy

28. The Medium-term Strategy 2013-2017 aims to chart the unifying course of future work programs and provide consistent guidance to ensure the likelihood of achieving long-term impact. For the duration of this strategy, IRENA will continuously monitor progress and align its activities with the stated objectives and commitments, and take the necessary corrective actions required. Lessons learned will be incorporated into successive programming cycles and the Medium-term Strategy itself will provide the overarching framework for future programming. Successive Annual Reports will review progress against the objectives of the Strategy, which will be revisited in 2016 on the basis of a mid-term evaluation, based on indicators of tangible impacts as defined in the work programme.