

Director-General 2016 Annual Report Speech

by

Mr. Adnan Z. Amin

Director-General International Renewable Energy Agency

to the

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Your Excellencies,

Distinguished Delegates,

Honourable Ministers,

It is my great honour to welcome you to the 12th meeting of the IRENA Council in our headquarters city of Abu Dhabi. I would like to congratulate H.E. Abdulkadir Risku Salihon, Ambassador and PR of Ethiopia to IRENA, on his election as our Council Chair, and Griff Thomson, Director of the Office on EE and RE of the US State Department on his Election as Vice Chair. I would

also like to express our sincere gratitude to Minister Kenred Dorsett, for his stewardship of the Council in the preceding meeting. Our thoughts are with the Bahamas, as well as with other countries in the Caribbean, in particular Haiti, Cuba, the Dominican Republic, the US and others who have been hit by Hurricane Matthew, causing 1600 deaths in the deadliest hurricane in the region since 2005]. Minister Dorsett's portfolio includes housing, and you can imagine that the events have led to his inability to participate with us today, but I'm sure that you will join us all in sending our sincere good wishes to him in the recovery effort.

We also note, although it is not related to climate or extreme weather events, the events in Italy with the massive earthquake that has hit central Italy with huge loss of life. I would like to extend our sympathies to the Italian delegation and the Italian people and government as they undertake valiant recovery efforts from this massive event.

But I would also like to extend a sincere welcome to the distinguished delegates gathered here. We have a very unique setting here in the IRENA Council. We have a 21-member Council. It is a hotly contested election every year, and we have very engaged member states. But it's not only the Council members who participate – what we are seeing now is that for the first time since the creation of IRENA, we have 100 countries and the European Union registered as participants in this meeting. That is way beyond anything we have ever had

before, and a real indicator of engagement and interest in the organisation, and we thank you for that. We also have five high-level representatives that I would like to welcome, starting with H.E. Thani Al Zeyoudi, Minister of Climate Change and Environment of the United Arab Emirates, our Host Country. It is a pleasure to have you with us. We also have with us H.E. Simon D’Ujanga, State Minister of Energy and Mineral development of Uganda; H.E. Magdy Rady, Assistant Minister of Foreign Affairs of Egypt; H.E. Kobina Fosu, Commissioner of Energy from Ghana; and H.E. Sebastian Kind, Undersecretary for Renewable Energy of Argentina. Welcome to all of you.

It is my pleasure to introduce the *Annual Report of the Director-General*, contained in document C/12/2. The report provides a detailed account of our progress in the implementation of the Work Programme for 2016-2017 during the past nine months of this first year of the biennium, and reflects on the plans for the coming months as the first year of the biennium comes to close.

When we started out just over five years ago, many in the world were not convinced that there was a technical possibility of an energy transformation of the type we are talking about now, or that renewable energy could play a major role in the changing energy mix supporting the global economy. But

developments during the past few years exceeded the expectations of even most optimistic supporters of renewable energy. It is remarkable to see that plummeting costs and rapid innovation have spurred investments, transforming renewable energy solutions from the periphery to the centre of the energy mix today. And last year's historic COP21 landmark agreement cemented global consensus that the change is inevitable, with renewables at the forefront of the transition to sustainability. It is therefore no longer a question of whether or if, but of how we can accelerate this change as a major driving force for a global, sustainable, low-carbon energy in the future.

I have just returned from the second International Energy Transition Forum in China. In his opening remarks, H.E. Mr. Nur Bekri made the comment that there was a natural partnership between China and IRENA, because China was the biggest producer and consumer of energy in the world, and that IRENA was the international organisation responsible for renewable energy. We are very pleased to see the strengthening of that link, because the transition in China will be central to the ability of the world to meet its climate targets in the future. It was remarkable to see the level of ambition and diverse experiences in the development and deployment of renewables. Energy systems are being diversified, decarbonised, electrified and decentralised, a process set to face many challenges. There is no silver bullet to transform the energy system to a sustainable, reliable and affordable one. The world will need a wide range of

differentiated solutions to make this a reality, ranging from new financing models to reshaping policies, to mobilizing public and private funding.

This will be multifaceted action at different levels and will require international cooperation at scales we have not seen before in energy.

Our REmap 2030 demonstrates that if we double the share of renewables in the global energy mix, we can be on the path to attain development and climate goals that are central to a sustainable future. At the core of this effort is continuous technology innovation - whether it is an engineer's dream to turn a city into a storage facility or a community that powers itself with a make-shift wind turbine, innovation is changing the system we know and disrupting business as usual across the world.

And the outlook is truly exciting. Low technology costs are translating into record capacity - our latest data shows that in 2015 alone, 152 GW of new renewable capacity was added, more than any other source of energy in the global power mix. With increased deployment, new solutions emerge and technology costs continue to decrease. IRENA's analysis of the cost patterns for wind and solar has found that every doubling of cumulative installed capacity reduces prices by 20 per cent. This means, in our analysis, that by 2025, costs

for solar PV could drop by a further 59 per cent, offshore wind by 35 per cent, and concentrated solar power by 43 per cent. This is bound to catalyse deployment, but will also present challenges of transition and system integration of variable renewable power.

The energy system of the past was designed with a centralized model in mind. In today's world we have more technologies, and more people who need access to power. We therefore need a system that embraces change and an operational model that allows for people to participate in different ways. In May this year, we convened the first IRENA Innovation Week meeting in Bonn. Stakeholders – from policy-makers and thought leaders to engineers, utilities and regulators - shared the wealth of experience and diversity of views from all corners of the world. Here, innovation emerged as an enabler of change at all scales, from micro-grids to continental super-grids, from rural communities to dense urban settings. Innovation week concluded that the technologies required to push a global renewable energy transformation during the next two decades already exist, but more innovation in policy formulation, markets, and business models is required.

With our global reach, state of the art data and analyses, and active Member participation, IRENA is playing an indispensable role in this context. We are taking part in a range of processes to both contribute to, and learn from common efforts around the world. For instance, following the extensive work on the G20 Renewable Energy Toolkit and an action plan developed under the presidencies of Turkey and China, we are now working with our colleagues from IEA and OECD on a decarbonisation study, commissioned by Germany as the incoming G20 presidency. There is still much work to do, and we hope we can present a compelling case, based on our data and information, about the immediacy of action for decarbonisation. In collaboration with the CEM, chaired by the Energy Secretary of the United States, we participated in the Corporate Sourcing Campaign. We are strengthening our work with the private sector and I invite you to participate in a side event on this subject and engage in this new stream of our programmatic work. I believe this is truly exciting. We had the opportunity to have the last CEM meeting in San Francisco. I had the honour of chairing the roundtable discussion on corporate sourcing of renewables. We had corporate leaders from Apple, Facebook, Microsoft and Google around the table together with other mainstream actors and corporations actively talking about corporate decisions to source renewable energy as an impetus for investment in the future. I think this is a truly exciting new development, which we believe has great potential to spur change.

We are increasingly called upon to contribute to national and regional efforts to increase the share of renewables in their plans and strategies. Only a few weeks ago, we had an interesting and productive meeting with the regional stakeholders as we discussed the initial findings of the REmap for EU. This work will contribute to the EU discussion on how to attain – and possibly exceed - their renewable energy targets.

Similar work is underway in all regions, and I will mention only a few recent engagements. We completed a series of workshops in Panama last week, convening key energy stakeholders from Central America, including Central American Integration System Member States, regional and national electric utilities, distributors, operators, and regulatory authorities. This will contribute to the on-going work on the Central America clean energy corridor, in which many regional countries have a central interest.

We have undertaken similar efforts in Southeast Asia in support of the greater integration of non-hydro renewables in the evolving ASEAN Power Grid, with workshops in Thailand and Myanmar. In Thailand, we are also piloting a new approach with a simultaneous deployment of two our key tools of the RRA and

REmap methodologies to ascertain both the immediate enabling framework needs as well as the medium- to long- term technology pathways.

For the first time, we had a consultative forum in Central Asia during the 7th International Forum on Energy and Sustainable Development in Baku in Azerbaijan, in order to enhance the collaboration in the renewables sphere among government experts, key national and regional stakeholders. This turned out to be an extremely constructive dialogue, which paved the way for engagement at the ministerial level in the coming months. I really think that the possibility of large-scale investment in renewables is very close to economic and technical feasibility in the Central Asian region, and closely aligned with the development of infrastructure, and it could be transformational in the coming years.

Building on the work to date, IRENA and the Ministry of Energy of Romania organized a regional South East Europe consultation meeting in Bucharest in early October. The meeting gathered representatives of governments, TSOs, energy regulatory authorities and key regional stakeholders, such as the Energy Community, to help identify needs and priorities, as well as IRENA's role in this region.

An important part of our county support is also with island nations, which has been the case since the inception of this organisation. Under the umbrella of the Lighthouses initiative, we are able to provide concrete and impactful support, and gather valuable insights. I am delighted that we have with us Ambassador Perina Sila of Samoa, who worked very closely with the Prime Minister of Samoa during the SIDS conference in Samoa in 2014, and the adoption of the Samoa pathway which charts the way forward for SIDS. The SIDS Lighthouses Initiative has become the framework of choice for countries around the world for engagement on islands. With 39 Quickscans completed, we are realising certain patterns in the needs and priorities. For instance, majority of SIDS have some sort of grid stability study undertaken, but the depth and quality of those studies varies, and they are of limited use for long term planning. An example is a roadmap for Barbados developed by IRENA in collaboration with the government and energy stakeholders and released recently, which shows that the share of renewables in the power mix in the Barbados can exceed 70%, compared to the initial assessment of 10% by the utility. Our comprehensive grid stability studies and the software we that have pioneered for the development of this are revolutionising the perception of how small systems can integrate large shares of variable renewables. Quickscans also show that the capacity for the management of high shares of renewables is limited. To rectify

this, we are facilitating knowledge sharing and capacity building, most recently in Cuba where we convened the national utility, Cuban technical experts, international planners and operators on key issues and challenges to be addressed to reliably operate Cuba's electricity grid.

Our engagement with countries and regions is giving us a comprehensive overview of the key trends, as well as obstacles, many of which relate to finance and investment. IRENA's report on the *Role of Risk Mitigation and Structured Finance* highlights the need for a greater support of the project initiation, development and facilitation. I had a long discussion last night with the project facilitator for the Africa Renewable Energy Initiative, launched in Paris, who was visiting us, and this was the precisely the conclusion we came to – that this was the key enabler for allowing the development of investment grid proposals in the future. To help meet this need, IRENA offers a range of project support tools, such as the Global Atlas, the Project Navigator currently used by over 1300 project developers around the world and the IRENA/ADFD facility – the fourth cycle underway, with 79 projects already received.

At the end of last year, we launched the Sustainable Energy Marketplace, which has evolved much faster than anticipated. SEM is now an active platform

containing over 150 projects seeking USD 7 billion in investment. It is also an avenue for forging partnerships with key financing institutions. For instance, the Sustainable Energy Marketplace for Latin America and the Caribbean, a joint effort by IRENA and the IDB, provided a \$300,000 technical assistance award to advance the development of six renewable energy projects across Latin America and the Caribbean. The projects — based in Argentina, Colombia, El Salvador, Haiti, Honduras, and Mexico were chosen from 76 total proposals received. With its expansion to different regions of the world, the Marketplace is not only a facilitation tool, but also a window into the wealth of experience and best practice that can help to overcome existing barriers.

IRENA has placed renewed focus on the benefits of renewable energy, which are powerful drivers for accelerated deployment. Our flagship annual review of jobs sends a strong message in this regard, tying renewable energy deployment to a range of new economic opportunities. The 2016 review also included a special segment on jobs in off-grid applications that are reshaping not only the story of access but also economic models and social patterns of the past.

This was discussed in great detail at the 3rd International Off-Grid Renewable Energy Conference that took place in Nairobi a few weeks ago, and I would to thank my compatriots for the support we received from his country for the conference. Convening 600 participants, IOREC is now proving to be a major

platform for collaboration on the off-grid renewable energy value chain. These 700 participants were from all over the world. And the opportunities along this value chain are immense. For instance, we know that some 60 million people may be using off-grid renewable electricity of some kind in Africa. Small solar PV systems for single households can now provide basic electricity services for as little as USD 56 per year. Analysis has also shown that technological innovation and new business models will reduce the costs of producing electricity from renewable mini-grids by more than 60% in the next two decades at a time when the business case mini-grids and micro-grids is strengthening in many off-grid countries. This was a remarkable event for off-grid access. We have in the past heard many times people quoting numbers – 1.2-1.3 billion rural poor without energy access. But from our analysis of the trade data, we see that the momentum around the importation of small-scale solar into African markets is revolutionary. It is changing this number on a daily basis. We need to study these figures more to see how positive models of off-grid energy access can be facilitated further.

Embracing new and innovative ways of presenting analysis, IRENA also launched at IOREC our first interactive digital publication, *Decentralised Solutions in the Agri-food Chain*. The report highlights the socio-economic benefits of using decentralised renewable energy to increase production and

productivity of the agri-food chain, which can help provide sustainable livelihoods for millions of people.

On the other side of the spectrum we find the sprawling urban settings that require different solutions. We engaged several hundred participants including mayors, city planners, and policy makers from around the world in a day-long discussion on renewable energy during the *RE-energising Cities: Renewable Energy in Urban Settings* forum in Quito. This forum, hosted in partnership with Governments of Ecuador, Germany and the UAE, was held during the Habitat III conference which adopted a New Urban Agenda for the coming 20 years. This was the first time we had a structured engagement with cities, and we will discuss this in more detail later today, but I want to highlight two points that come across very strongly. One, cities will play a major role in transforming the transport and building sectors, both of which are critical to the decarbonisation of the energy sector and require significant innovation to accelerate progress. Second, while circumstances of cities and municipalities are diverse and require local solutions, cooperation among provincial, national and global levels is needed to accelerate deployment. This Forum has provided us with first-hand information that will help us refine the current programmatic activities, and shape the future focus.

Before I conclude, I would like to highlight some institutional considerations. The implementation of our programmatic activities is enabled by the timely receipt of Members' contributions. Since the submission of the annual report, we received additional assessed contributions for 2016, which now amount to 94% of the total for 2016. In addition, USD 4.9 million was received from Germany and USD 2.85 million from the UAE in core non-assessed contributions. We are grateful to our Members for their timely payments, and look forward to receiving the outstanding contributions shortly.

We are also grateful to Members who are providing additional voluntary contributions to enable the full implementation of the Work Programme. The report reflects USD 3.2 million in additional voluntary contributions from Germany, Japan, and the UAE, and we since have received an additional USD 1 million from Germany. We also benefit from the voluntary contributions pledged in the previous years, including from Belgium, France, Germany, Japan, Norway, Sweden and Switzerland. Since the submission of the report, we have received also pledges from the European Commission, Germany and the Netherlands. These are welcome additional funds, as we have a significant number of programmatic activities yet to be resourced. We look forward to working with you to secure the resources needed in this cycle and for the continuing growth of the Agency in the years to come.

I am also pleased to inform you that IRENA has qualified as an ODA-eligible international organization and I would like to thank all of you who have supported IRENA's application, especially Germany and the UAE who managed our application process. With this change, donor countries may report their contributions to IRENA's core budget with a coefficient of 66%, as well as voluntary contributions provided they meet the ODA requirement to have the promotion of economic development and welfare of developing countries as their main objective. We are confident that this important change in the IRENA status will contribute to diversification of the resource base in the future.

Excellencies, distinguished delegates,

We live in a time of extraordinary change; change that is reshaping the way we think, live and work, and bringing amazing opportunities that will revitalize economies and lift people out of poverty, but also disrupt the known and put strain on the incumbents. The pace of this change will only accelerate. With the continued implementation of the work programme and responsiveness to the needs of our Members, we are playing our part in ensuring that the future we need becomes a reality. All of this is possible because of the support we that receive from all of you as members of this institution. The scale and pace of growth of membership that this organisation has achieved is remarkable. I have noted that for a treaty-based organisation, we have had the fastest growth in

members of any treaty-based organisation since the Second World War, and the scale of growth in membership of the organisation, the quadrupling of the budget is also a remarkable development that is unprecedented in multilateralism. This is an indication of the support that you have given us, and it is an indication of the importance of the issue we are dealing with. But this would not have been possible without a committed, highly motivated, qualified group of staff, many of them young, many of them giving up their own time for the Agency, and who have really gone out of their way to make contributions that in five years we have been able to achieve the extraordinary success of this organisation. As we discuss institutional issues in the future, I would ask the members to bear this in mind. With that, we look forward to your feedback on the work to date and your guidance on the path ahead of us.

Thank you very much.