

Opening remarks

by

**Mr. Adnan Z. Amin**

**Director-General**

**International Renewable Energy Agency**

at the

**3rd International Off-grid Renewable Energy Conference**

Nairobi, Kenya, 30 September 2016

Good morning Ladies and Gentlemen,

Your Excellency Honourable Cabinet Secretary Charles Keter,

I am very pleased to have this opportunity to welcome you to the third International Off-grid Renewable Energy Conference (IOREC) 2016. We have more than 500 participants from all over the world who will be taking part in this unique event during the next two days, the largest number of attendees to this conference that we have seen since we have started in 2012 in Ghana.

Our first Off-grid Renewable Energy Conference was in the West Africa region, the next two years later was in Manila, which was extremely well-attended, but this one has broken all records. What this signals to us is the growing interest and opportunity for off-grid electrification that we see today, that has not existed in terms of technology, economics and the business case for a long time.

I am pleased to welcome you not only because I am Kenyan, but more importantly because Kenya and East Africa at large have been at the forefront of efforts, in recent years, to expand energy access through innovative technological solutions and business models which have gained attention worldwide.

In this connection, I would like to pay tribute to the Kenyan government, represented today by the Hon. Charles Keter, Energy Secretary, for making universal electricity access by 2020 a key national priority and for the impressive progress achieved so far towards fulfilling this objective, particularly in terms of off-grid rural electrification. Let me also express my gratitude to the Kenyan authorities for their warm hospitality and their support in organizing this conference which is held in partnership with the Ministry of Energy. Finally, my appreciation also goes to our colleagues and friends in the Alliance for Rural Electrification (ARE), who have been partners in this enterprise from the beginning, for convening this conference.

Ladies and Gentleman,

We are witnessing an unprecedented momentum for decisive global action to tackle energy access for the first time. International policy and cooperation frameworks are guiding our efforts to advance sustainable development and combat climate change and have put energy access at the centre stage: the UN Sustainable Development Goal 7 mandates universal access to electricity by 2030; and the decision adopting the Paris Agreement acknowledges *the need to promote universal access to*

*sustainable energy in developing countries, in particular in Africa, through the enhanced deployment of renewable energy.*

We have a combination of elements that have come together to create this momentum and opportunity for us. The climate discussion has come together with energy for the first time and there is tremendous attention to how energy is a central aspect of how we will deal with mitigation in the future. This has come together with the Sustainable Development Goals and the sense that energy access will be the key to unlock development in the future and poverty eradication. This has also come together with the business opportunity that renewable energy technology and its cost equation represents today.

So, never has energy access been so firmly at the top of the agenda of political leaders and decision makers. IRENA, our agency, is part and parcel of this global momentum and we will be paying special attention, in the coming time, to this pressing global priority. We have focused a lot in the past on utility-scale investment, we have focused a lot on technology development, innovation, and deployment, but now we think that the access agenda and development will be critical for the future.

We know political will is important but it's not enough. The good news is that we have the technology solutions, the innovative business models and the financing schemes to achieve transformative change in the way we approach electrification. The business case to deploy off-grid renewable energy solutions has never been stronger, and our assessment is that if we are talking about universal energy access in light of the Sustainable Development Goals, 60% of additional generation will have to come from off-grid deployment, so this is a critical aspect of the energy agenda.

Renewable energy technologies are now the most economic option for off-grid electrification. This is chiefly driven by drastic cost reductions. The cost of solar photovoltaics (PV) has fallen by as much as 80% since 2009. Our recent report, *Innovation Outlook for Renewable Mini-Grids, which will* launched at this conference, predicts that technological innovations and new business models will reduce the costs of producing electricity from renewable mini-grids by more than 60% in the next two decades. So if we are cost-competitive today and we have a 60% reduction over the next two decades we will see that renewables will become the dominant solution for electrification. Meanwhile, our recent study on *Solar PV*

*in Africa: Costs and Markets* finds that small PV systems for single households can now provide basic electricity services for as little as USD 56 a year, a cost similar or lower to diesel-fired generation or kerosene-based conventional lighting, which also have severe health consequences as we know.

Recognising the immense opportunity at hand, the private sector and markets are increasingly playing a key role in deploying renewable off-grid solutions, whether its local entrepreneurs and SMEs or larger international companies. And this dynamic is not limited to a country or a region, but has the features of a global transformation in the way rural energy supply infrastructure is being developed.

Here in Kenya, we find ourselves at one of the epicentres of growth where solar products, combined with pay-as-you-go models and mobile payment technologies, are breaking new ground in the bottom-up development of the electricity sector. Across East Africa, more than 350,000 households are powering homes and devices with solar panels and using mobile money to pay for it.

Kenya is innovating in technology in ways that we haven't seen in other parts of the world on energy, and that's a remarkable development.

We have Dipal Barua with us from Bangladesh, and in Bangladesh over 4 million solar home systems have now been deployed, reaching over 18 million people or 11% of the total population. We are seeing similar dynamism across other markets and technologies, from micro-hydro development in South and South-East Asia to biomass-based mini-grids in India, to solar and wind hybrid mini-grids in Tanzania, Kenya and Mali. In 2015, USD 276 million was invested in off-grid solar sector alone across the world, which is a 15-fold increase over 2012. So in the three years between 2012 and 2015, investment in off-grid solar increased by 15 times. I think this is one of the indicators for what we see happening in the future.

And this suggests that the traditional access picture we are familiar with might need to be revisited. I challenged our statistics department recently, because my sense was that there was a lot of deployment that we are not capturing. What we see is a traditional rhetoric of some that everything is a disaster, somebody needs to do more, but never talking about the solutions. We have started looking at the trade data for Africa in terms of how the statistics for how we see home-based solar solutions, lanterns, others, coming in. And the trade statistics are giving us a very promising picture of what's developing. According to the latest IRENA off-grid renewable

energy statistics, about 60 million people may be using off-grid renewable electricity of some kind in Africa. That is about 10% of those living off-grid. Almost all of this has appeared in the last five years, only. Though off-grid renewables remain a relatively small part of overall renewable capacity, they are growing very fast, quadrupling over the last five years to reach 800 MW in 2015. These are remarkable numbers whose implications we need to reflect on a little bit. We want to develop this into the narrative for the future, because we want to move from the negative picture of poverty and deprivation to one of: we now have an opportunity in our own hands to incentivise our private sector, empower our people, and invest in solutions that are going to generate income, employment and growth over the future. This is what we need to look at and this is the opportunity that is provided by renewable energy.

In addition to making economic sense, off-grid renewables are being deployed across many sectors, including health, water, agriculture and education, simultaneously contributing to at least 12 Sustainable Development Goals (SDGs) across the spectrum. IRENA's other report: *Renewable Energy Benefits: Decentralized Solutions in the Agri-Food Chain*, will be also launched at this

conference, and it finds that renewable energy can generate considerable time and economic savings as well as significantly improving output in terms of production, agro-processing and cooking.

But if we wish to harness the synergies/interlinkages between the SDGs, it is necessary to change our mind-set away from the silo-based approach to policy making and to look at the true value of energy access, which is in the end-uses and the development impact it can have.

To tap onto this potential, it is, however, imperative to put in place an enabling environment through dedicated policies and regulatory frameworks to catalyse private sector participation, particularly in the mini-grid sector. To support policy makers in this area, we are presenting a report on *Policies and Regulations for Private Sector Renewable Energy Mini-Grids*. It provides policy makers with the information they need to design and implement tailored policies and regulations addressing issues such as licensing, tariff regulation, main-grid arrival risks and access to finance for mini-grids. The findings will be presented tomorrow morning to set the stage for a day-long discussion focused on mini-grids tomorrow.

Through IOREC, IRENA and its partners provide a global platform for sharing experience and best practices for the deployment of off-grid renewable technologies both stand-alone and mini-grid. For us, it represents an important milestone to share our work with the stakeholders in the sector and also shape our future engagement in this area. We are delighted to host experts who have travelled from around the world to share their experience, we are delighted to have with us representatives from public agencies responsible for off-grid development from over 20 countries in Africa, in addition to several key development partners and private sector players.

A real off-grid break-through is taking place, and international, cross-sectoral cooperation is needed to accelerate this trend. The building blocks for this to happen are many: they include: designing and implementing dedicated policy and regulations; facilitating access to finance; developing innovative business models; adapting and improving technologies and providing capacity building.

And that's why I am so pleased that we are in Kenya, and, Honourable Secretary, the progress that Kenya has made is truly an inspiring example of what we can achieve, to share the experiences that we have.

I hope at the end of this discussion, we can walk away with clear action-oriented approaches in our minds to really support our joint efforts to scale-up off-grid renewables, for economic prosperity, poverty eradication, and for environmental sustainability. Thank you for your participation and I wish you a most successful conference.

Thank you.