IRENA
International Renewable Energy Agency

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Note of the Director-General

The Role of Renewable Energy in NDC Implementation

I. Introduction to NDCs

1. At the UN Climate Conference in Paris in 2015, UNFCCC Parties reached an historic agreement to combat climate change. The Paris Agreement sets an unambiguous goal to keep the global temperature rise to "well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C".

2. The Paris Agreement provides a framework for bottom-up climate action and relies on all Parties to undertake ambitious actions with regard to their specific circumstances and capabilities. A central pillar inscribed in the Agreement is the Nationally Determined Contributions (NDCs); national climate action plans which outline each Parties' commitments to address climate change. It is envisaged for NDCs to reflect the "highest possible ambition" of each country, to be revised every five years to take stock of collective progress, and enhance ambitions as required by science.

3. In the lead up to the Paris Conference, a total of 187 Parties submitted their interim NDCs, and over 60 of them have ratified the Paris Agreement by late September and submitted their first formalised NDCs, which they are legally committed to undertake once the agreement enters into force.

II. Overview of the role of renewables in NDCs

4. With some two-thirds of global emissions deriving from the energy sector, deployment of renewables to reduce carbon intensity in energy production and consumption will be critical to address climate change. In this regard, the 21st Conference of Parties in Paris was an important milestone that reinforced what IRENA has long argued: renewable energy technologies offer the most technically feasible and economically viable solution to decarbonise energy production, build a climate-resilient future, and avoid catastrophic climate change.

5. A significant share of INDCs, submitted before the Paris Agreement, specifically mention renewables, though few provide details on implementation. Of 158 INDCs analysed, 75 provide quantified renewable energy targets, 33 state that they want to increase renewables as part of their mitigation efforts, and 32 mention renewables without stating whether their share would increase or not. Earlier this year, IRENA conducted a detailed overview of INDCs in Africa showing that all of the 53 African countries that submitted INDCs, included renewable energy. In some of these cases, there is specific information on the targets envisaged, while in others, countries refer to possible reform of the energy sector to increase the share of renewable energy.

III. The role and cost of renewables in meeting the climate target

6. IRENA's analysis shows that an aggregation of all INDCs would yield a reduction potential of greenhouse gas emissions of about 7-8 Gt compared to the level that would otherwise be emitted - according to a reference case - in 2030, at 42 Gt. At its most, one-third of this saving potential (2-2.5 Gt) is related to renewable energy. This level of reduction potential from INDCs would result in an average global surface temperature increase of between 2.7-3°C, which is lower than a reference scenario, but still insufficient to meet the goal of keeping the temperature increase well below 2°C.

7. The IRENA Roadmap for a Renewable Energy Future – REmap – determines the realistic potential for countries to scale up renewables by 2030. It further provides an analysis of the reduction potential of greenhouse gas emissions through an increased share of renewable energy in the global energy mix. REmap analysis shows that staying well below 2 °C above pre-industrial time, as called for in the Paris Agreement, would be possible with a doubling of the renewable energy share to 36% by 2030 compared to the 2014 level and additional energy efficiency efforts. The amount of renewables that needs to be deployed in realising a doubling worldwide is by a factor five higher than what is envisioned in the INDCs.

IV. IRENA's work to support NDC implementation

8. The Paris Agreement is expected to come into force well before 2020, possibly already this year. A challenge that many countries face prior to ratifying the Agreement relates to the revision and refinement of their INDC plans, as part of the re-submission and formalisation as NDCs. An even greater challenge will be to advance NDCs towards implementation. This includes efforts to ensure coherence with national policies; enhance ambition where possible; ensure that the right policy frameworks are in place; and identify a stream of activities to prepare for, and attract investment. This work requires considerable coordination and stakeholder engagement.

9. IRENA contributes to climate action through various components in its Work Programme. In early 2016, IRENA organised a series of sub-regional expert meetings on climate change and enhanced renewable energy deployment in Africa. These expert meetings aimed to raise awareness on the renewable energy aspects of the INDCs in the context of national efforts to address climate issues. The meetings brought together national climate and energy experts to chart how to further refine the renewable energy aspects of INDCs. In addition to a better understanding of the work on INDCs in Africa, the discussions served as a basis for the elaboration of a framework guide. This guide, UMEME[1], provides governments with a structured approach to increasing the share of renewables and coordinate NDC implementation across different parts of national administrations, including ministries, agencies and national and subnational governments. One essential element of the UMEME framework is the identification of climate finance and technical assistance sources to support the various stages in the process towards implementation of NDCs and renewable energy activities.

10. To further support effective use of climate finance to accelerate the deployment of renewables and the implementation of NDCs, IRENA works with climate finance institutions including Green Climate Fund (GCF), Climate Investment Funds (CIFs) and Global Environment Facility (GEF). This involves collaboration on readiness activities building on a range of IRENA's programmatic activitries including Renewables Readiness Assessments (RRAs) and REmap country work. With the GCF, collaboration has been agreed on a number of pilot countries to link the GCF and IRENA's readiness programmes. Work is ongoing with ADB to deploy GCF resources through a renewable energy facility for the Pacific;

[1] 'Umeme' means 'electricity' in Swahili. It also stands for Understand, Measure, Evolve, Modify, Evaluate, a five step-process that African policy makers are invited to follow to increase renewable energy in their energy mix.

and with KfW on a Liquidity Reserve Facility to cover off-taker risk for sub-Saharan Africa. IRENA will support the GCF secretariat programmatic work related to renewable energy.With the CIFs, work is planned to provide support to countries on their Scaling up Renewbale Energy Program (SREP) investment plans.

11. As countries progress with the implementation of the renewables component of NDCs from plans to investment opportunities, leveraging investments through effective use of climate finance, a positive dynamics can unfold that will enable countries to strengthen the level of ambition of their NDCs and move the world closer to its climate objective.

V. Questions for discussion

- How can NDC process help increase country-level ambition on renewable energy?
- Are there examples of successful use of climate finance to advance on renewable energy plans that could be replicated?
- How can IRENA best support the implementation of NDCs?