#Renewables4Climate

IRENA
International Renewable Energy Agency

RENEWABLE ENERGY IN NATIONAL CLIMATE ACTION

Updates to IRENA's 2017 analysis of the renewable energy components of NDCs

Nationally Determined Contributions (NDCs) are a cornerstone of the 2015 Paris Agreement. They set out the actions planned by countries in pursuit of shared global climate objectives. In essence, this means striving to limit the rise in average global temperatures to "well below 2°C" above pre-industrial levels and ideally to 1.5 °C during the present century.

Under the historic climate accords, renewables have come to the fore. Renewable energy components, moreover, feature prominently in the first round of NDCs arising from the 2015 Agreement. Of the 152 NDCs that were formally submitted to date (end-November 2018), some 111, or nearly three quarters, cite specific renewable energy targets, while another 34 acknowledge renewables as an important way to reduce greenhouse gas (GHG) emissions and adapt to climate change impacts.

All Parties to the United Nations Framework Convention on Climate Change (UNFCCC), however, still have the opportunity to further strengthen their targets for renewables in the next round of NDCs, planned for 2020.

The International Renewable Energy Agency (IRENA) analysed NDC-based renewable energy pledges in late 2017, particularly in relation to national energy plans and actual deployment trends. In many cases, NDCs were seen to be falling behind rapid actual growth in renewables. Even countries without targets in their NDCs often had ambitious plans for renewables in the energy sector, the analysis found (IRENA, 2017).

INITIAL ANALYSIS OF RENEWABLE ENERGY IN NDCS

IRENA first comprehensive analysis of this issue covered the NDCs submitted by 194 Parties to the UNFCCC by mid-October 2017. This entailed reviewing the renewable energy components of NDCs worldwide and estimating the investment required to implement those commitments.

The resulting findings were published for COP23, the 23rd Conference of the Parties to the UNFCCC, in the report *Untapped Potential for Climate Action: Renewable Energy in Nationally Determined Contributions* (IRENA, 2017).

Since then, ratifications of the Paris Agreement have continued. Some of the Parties that had already ratified it, meanwhile, submitted new NDCs, in some cases including updated renewable energy components.

This note aims to provide an overview of these changes and update the analysis accordingly.

FURTHER RATIFICATIONS OF THE PARIS AGREEMENT

Since 15 October 2017,[1] 16 new Parties have ratified the Paris Agreement (see Table 1).

Table 1: New Parties to the UNFCCC ratifying the Paris Agreement

Region	Number of new ratifying Parties	New ratifying Parties
Africa	7	Burundi, Democratic Republic of Congo, Equatorial Guinea, Guinea-Bissau, Liberia, Mozambique, United Republic of Tanzania
Asia	1	Uzbekistan
Eurasia, Europe, North America and Oceania	3	Montenegro, San Marino, The former Yugoslav Republic of Macedonia
Latin America	2	Colombia, Nicaragua
Middle East	2	Kuwait, Syrian Arab Republic
Small Island Developing States (SIDS)	1	Trinidad and Tobago

Based on UNTC (2018).
For detailed information regarding the regional breakdown see IRENA (2018a).

1 *IRENA's initial NDC analysis considered the ratification status of the Paris Agreement as of 15 October 2017.*

As of end-November 2018, all 197 Parties to the UNFCCC have either signed or ratified the Paris Agreement. Specifically, 184 Parties have ratified the Paris Agreement and 152 first NDCs have been submitted.[2] The remaining 13 Parties have signed but not ratified the Paris Agreement. These are Angola, Eritrea, Iran (Islamic Republic of), Iraq, Kyrgyzstan, Lebanon, Libya, Oman, the Russian Federation, South Sudan, Suriname, Turkey and Yemen (based on UNTC, 2018).

While most Intended Nationally Determined Contributions (INDCs) automatically became NDCs with the ratification of the Paris Agreement, 11 Parties submitted updated documents, that is their NDCs are different from their INDCs. These include Argentina, Belize, Eritrea, Indonesia, Morocco, New Zealand, Sri Lanka, Uruguay and Venezuela (Bolivarian Republic of). In addition, Canada, El Salvador, Lesotho provided revised versions of their NDCs after their first submission. Libya and the Syrian Arab Republic are the only Parties that have not submitted any NDCs.[3]

Five Parties have updated their NDCs since IRENA's October 2017 analysis, namely El Salvador, Eritrea, Lesotho, Uruguay, and Venezuela (Bolivarian Republic of). The renewable energy components were updated in four NDCs (see Table 2). In addition, Nicaragua submitted its first NDC on 3 September 2018.[4] This includes the unconditional target of achieving 60% of electricity generation from renewable energy sources by 2030.

Table 2: Renewable energy components in new NDCs submitted after 15 October 2017

Country	Date of new NDC submission	Updated renewable energy component in new NDC?	Detailed changes in renewable energy component
El Salvador	30 October 2017	Yes	The new NDC provides additional detail on how the country intends to achieve its previously stated renewable energy target.
Uruguay	10 November 2017	Yes	The new NDC includes detailed renewable energy measures to achieve emission reductions by 2025.
Venezuela (Bolivarian Republic of)	27 February 2018	No	Renewable energy targets in the new NDC are unchanged.
Eritrea	19 June 2018	Yes	The new NDC provides more detailed renewable energy targets e.g. in terms of additional capacity installed for each technology.
Lesotho	22 June 2018	Yes	The new NDC provides more detailed renewable energy measures.

Based on compilation of NDCs as published by governments.

2 EU-28 Members submitted a joint NDC. In addition, Brunei Darussalam, Ecuador, Philippines, Senegal and the Syrian Arab Republic have ratified the Paris Agreement but not submitted their NDCs, while Eritrea has submitted an NDC but not ratified the Agreement (based on UNFCCC, 2018).

3 Or Intended Nationally Determined Contribution (INDC) in the case of Libya, as the country has not ratified the Paris Agreement.

4 Prior to that the country had not submitted any (I)NDC.

UPDATED ESTIMATES FOR RENEWABLES IN NDCS

Following the changes described above, the analysis of renewable energy targets in NDCs was updated. New global and regional figures for additional renewable energy capacity are as in Table 3. Updated results of the analysis by country can be browsed through an *online data tool* published on IRENA's website (IRENA, 2018b).

Table 3: Updated IRENA estimates of renewable energy components in NDCs, by region

Region	Number of Parties	Number of (I) NDCs with renewable energy target	Renewable energy capacity added unconditionally (GW)*	Renewable energy capacity added conditionally (GW)	Total additional renewable energy capacity (GW)
Africa	54	45	42	55	97
Asia	29	14	757	250	1007
Eurasia, Europe, North America and Oceania	53	5	27	45	71
Latin America	20	15	79	8	87
Middle East	14	8	8	4	13
SIDS	34	29	2	4	6
Total	**197**	**111**	**914**	**367**	**1281**

* GW = Gigawatts.

Global totals differ from the sum of regional totals as seven SIDS are included simultaneously in other regional groups. For additional detail see IRENA (2018a).

INVESTMENT NEEDS TO ACHIEVE CLIMATE GOALS

Over USD 1.7 trillion would be needed by 2030 to implement renewable energy targets contained in NDCs worldwide, IRENA's 2017 report found. At least 1.3 terawatts (TW) of renewable power capacity would be added globally by 2030 as a result of NDC implementation. This would amount to a 76% increase in the global renewable power installed capacity compared to 2014.

Notably, such growth expectations, although seemingly ambitious, lagged behind actual trends, as well as falling short of the ambitions expressed in national energy plans. The cost-effective potential for renewables, meanwhile, is much higher than what is captured in current NDCs.

Rapid deployment of renewables, coupled with energy efficiency, could achieve around 90% of the emission reductions in the energy sector needed by 2050, while at the same time advancing economic growth and development, IRENA's analysis found (IRENA, 2018c).

Upgraded NDCs could build on recent growth rates, pick up targets from national energy plans, and more closely reflect cost-effective potential for renewables. This would strengthen the effectiveness of the Paris Agreement and help significantly to limit the global temperature rise.

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