DANISH ENERGY AGENCY

ANALYZING THE 2030 EMISSIONS GAP
COP21 UPDATE

(WWW.ENS.DK/GAP)

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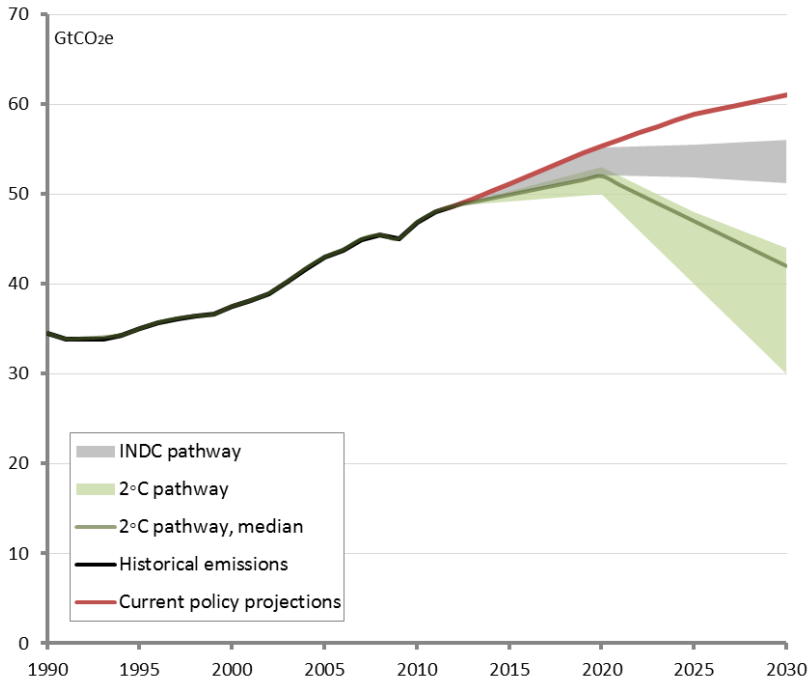
Summary

This analysis quantifies the 158 Intended Nationally Determined Contributions (INDCs) submitted to the UNFCCC Secretariat by the 8th of December 2015, representing 185 countries and more than 92 pct. of current global emissions (including emissions/removals from LULUCF). Main findings are that:

- Combined mitigation efforts of submitted INDCs **reduce global greenhouse gas emissions in 2030 by around 7.5 $GtCO_2e$**[1] [5.1 to 9.9 $GtCO_2e$][2] compared to current policy projections (an increase in reductions since the October 1st assessment of around 0.3 $GtCO_2e$[3]). This implies 2030 emission levels of around 53.6 $GtCO_2e$ [51.2 to 56 $GtCO_2e$].
- Mitigation efforts of INDCs are insufficient for keeping global average surface temperatures below 2˚C. The **emissions gap between the INDC scenario and the 2˚C scenario is around 11.6 $GtCO_2e$** [9.2 to 14.0 $GtCO_2e$] **in 2030.** This implies post-2030 annual emission reduction rates of between 4 and 6 pct. (IPCC, 2014).
- **INDCs postpone the depletion of the global greenhouse gas budget by around 5 years.** INDCs exhaust the global greenhouse gas budget by 2047.
- Including surplus emission allowances, **hot air, will increase the global gap in 2030 by around 1.4 $GtCO_2e$**.
- Differences in accounting rules for emissions and removals from **Land-Use, Land-Use Change and Forestry (LULUCF) can increase the 2030 gap by around 0.8 to 3.6 $GtCO_2e$**.



Sources: Historical emissions: UNFCCC CRF 2.0 GHG inventory database/WRI CAIT database; Current policy projections/INDC calculations: the COMPARE model (POLES/PBL/IIASA).

[1] Expressed in 100-years global warming potentials (GWPs) from the IPCC Second Assessment Report (SAR).
[2] Brackets refer to 95-percentage confidence interval.
[3] Note that the current update also changes the methodology applied for including hot air emissions surplus. Using the new framework for both assessments we find that the increased reduction compared to current policy emissions are around 0.5 $GtCO_2e$ in the current update compared to the 1st of October assessment.