Energy Transitions Commission

Assessment of impact of INDCs – Cross-country analysis

April 2016

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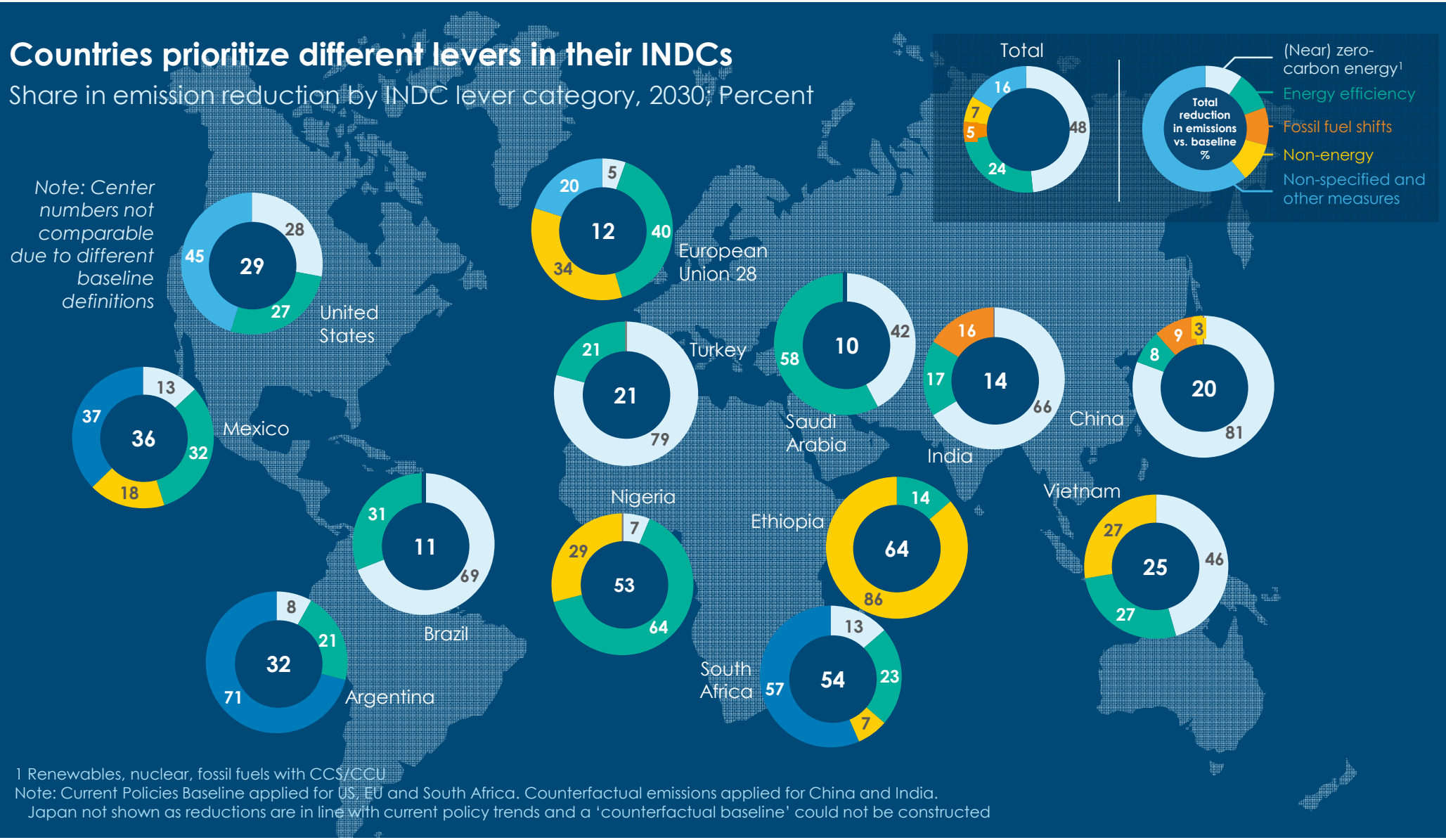
Countries prioritize different levers in their INDCs

Share in emission reduction by INDC lever category, 2030, Percent



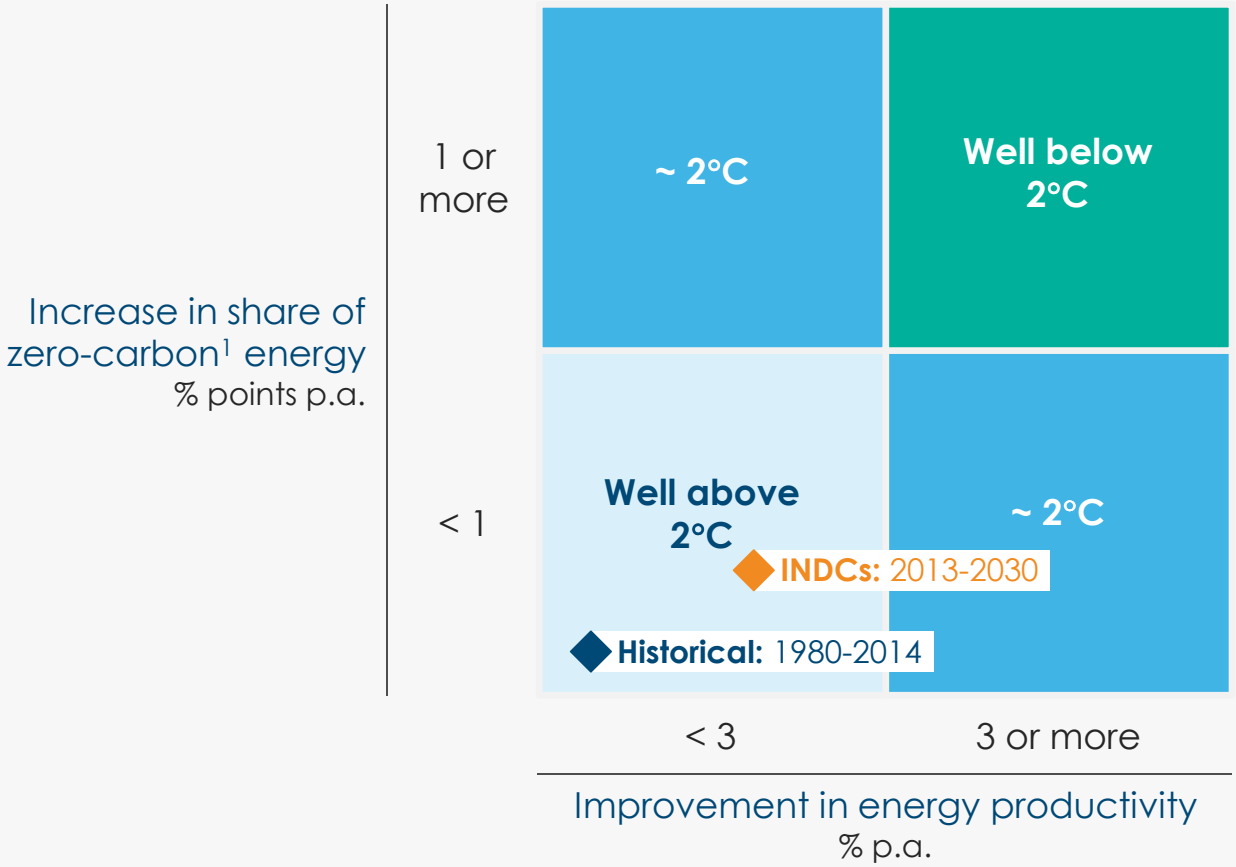
1 Renewables, nuclear, fossil fuels with CCS/CCU

Note: Current Policies Baseline applied for US, EU and South Africa. Counterfactual emissions applied for China and India. Japan not shown as reductions are in line with current policy trends and a 'counterfactual baseline' could not be constructed

EXHIBIT 3

Energy productivity and the share of zero-carbon energy will drive overall system change

Global primary energy demand, 2012-2050



1 We include here renewables, nuclear, biomass and fossil fuels if and when their use can be decarbonized through carbon capture and use or storage (CCS/CCU). However, if a large share of the increase is from the latter, a higher share is required since this does not reduce emissions to zero completely

SOURCE: Enerdata (2015), Historic actuals

EXHIBIT 8

Renewables will increase their share in power generation, fossil fuels continue to provide more than 50%, except in Brazil, EU and Ethiopia

Power generation mix; Percent[1]

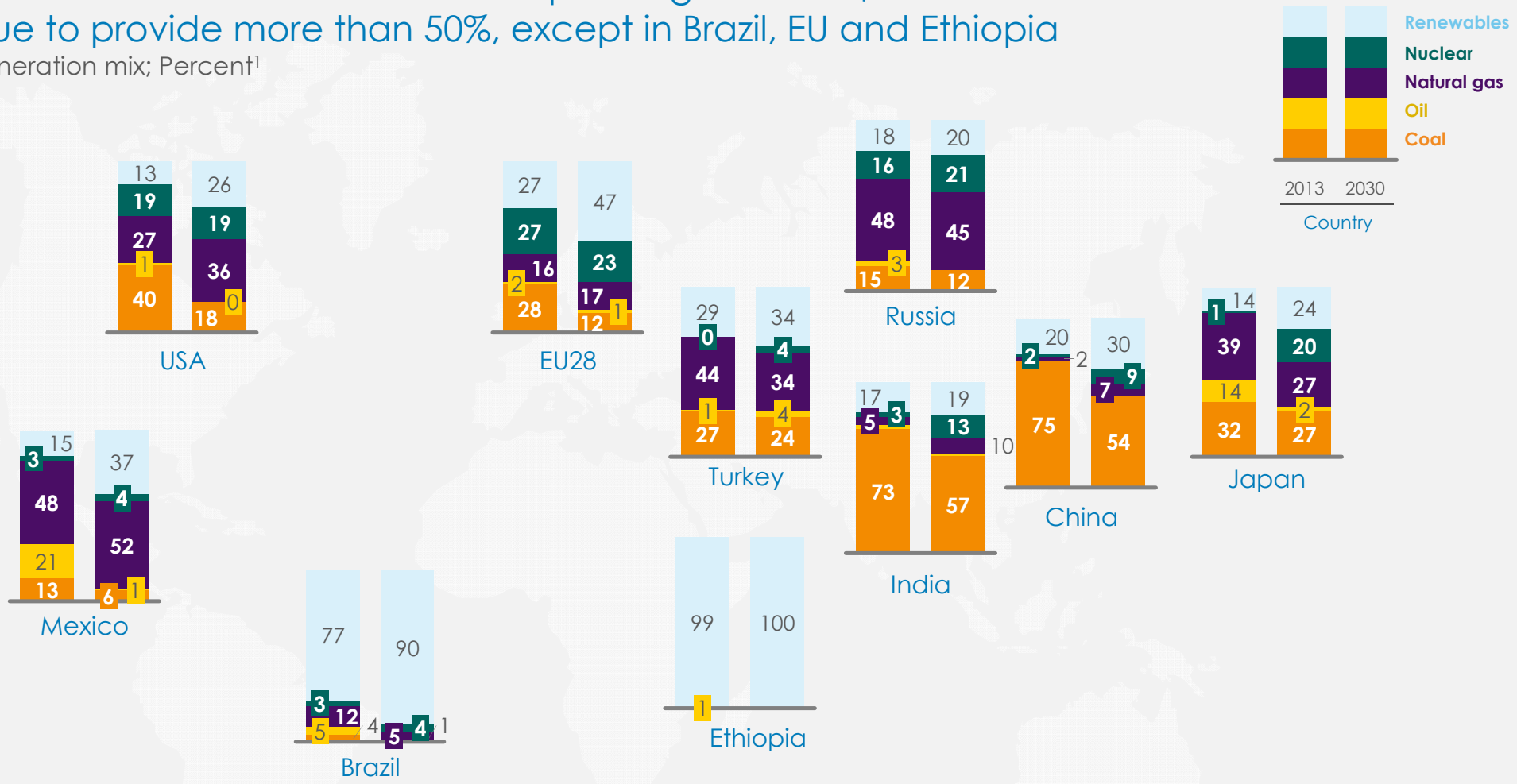
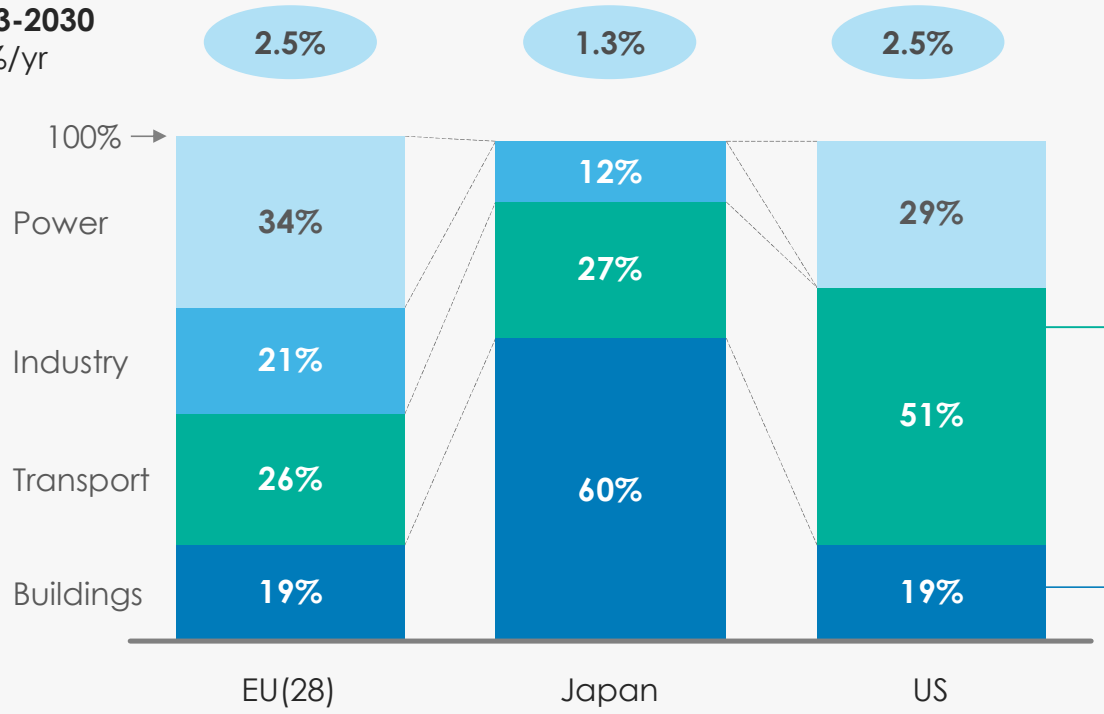
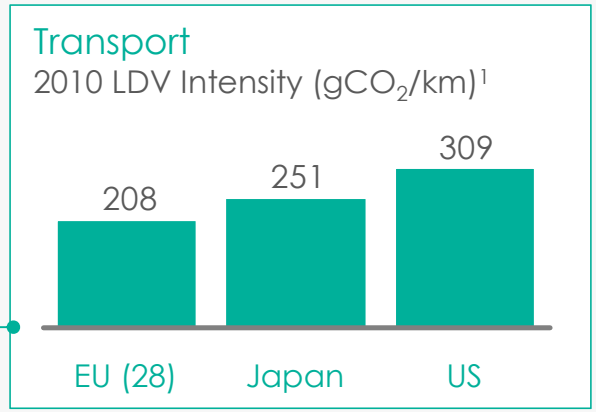


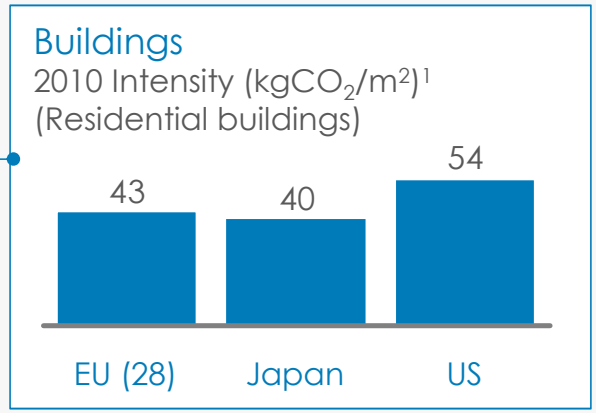
EXHIBIT 9

Industrialized countries set different priorities for improving their energy intensity

Contribution to total energy efficiency per sector; Percent





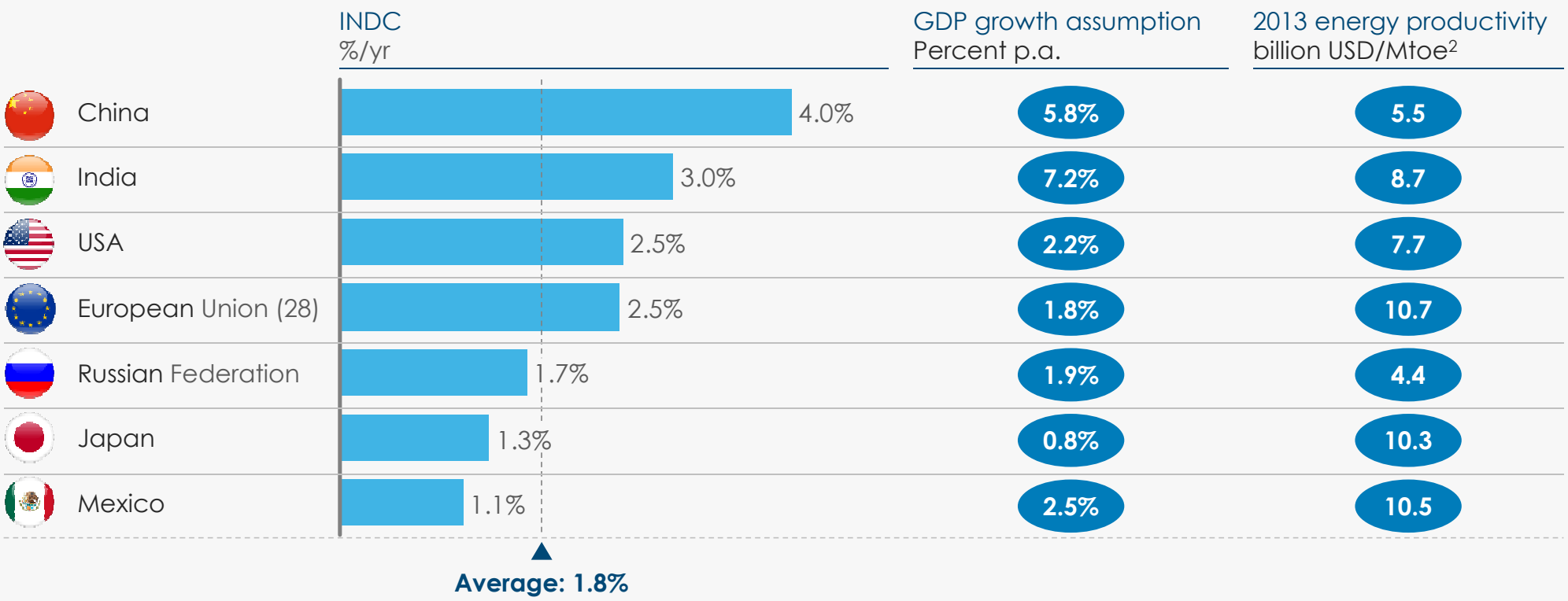


Source: Climate Action Tracker (2016)

EXHIBIT 10

Energy productivity grows by 1.8% on average, particularly driven by improvements in the top-4 emitters (China, India, US and EU)

Annual improvement in energy productivity by country; Percent[1]



1At market exchange rates. In PPP terms, the contribution of China is larger and average energy productivity improvements could be higher
2 World Bank (2016), GDP per unit of energy use (PPP $ per kg of oil equivalent)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European Climate Foundation
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DANISH ENERGY AGENCY
SUZLON
Umwelt Bundes Amt
nea
Nederlandse Emissieautoriteit
Dutch Emissions Authority
XEMC DARWIND
EuSalt
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