

Energy Technology Perspectives 2016

**Tracking Clean Energy Progress:
Setting the Scene for the Clean Energy
Ministerial**

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2 June 2016

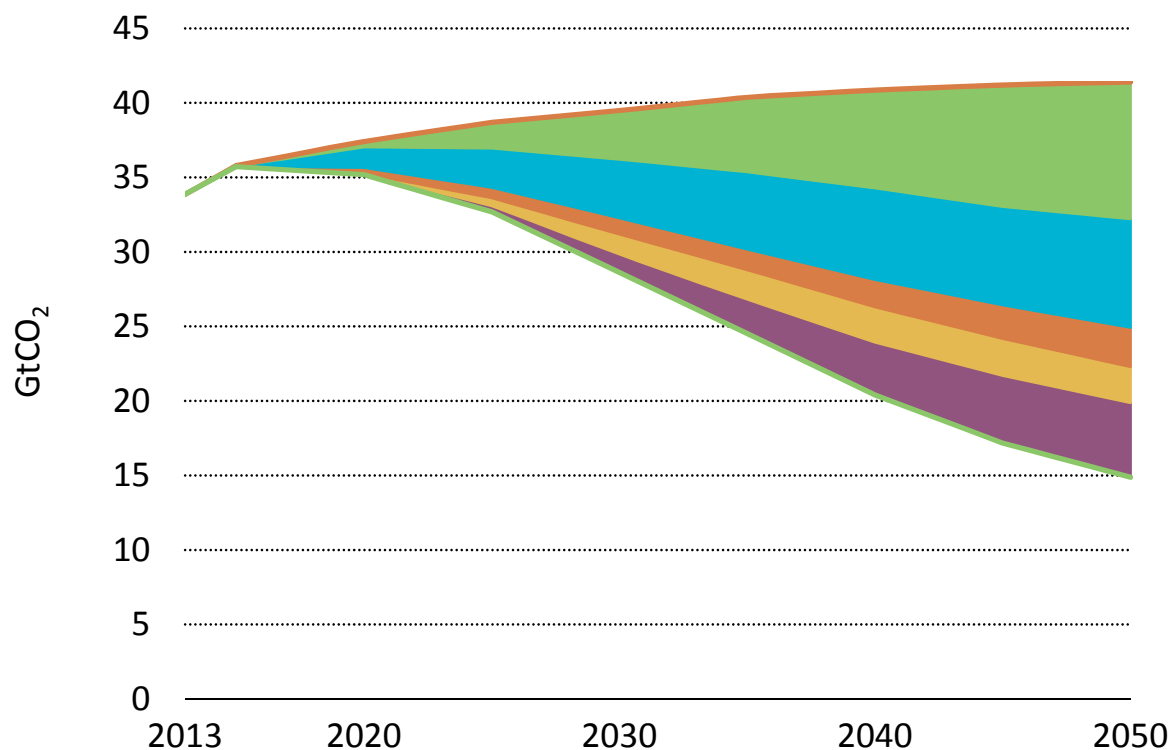


- First clear signs of decoupling of CO₂ emissions and GDP
 - *Global energy-related CO₂ emissions remained flat in 2015 for the second year in a row*
 - *Renewable power capacity at record high with over 150 GW installed in 2015*
- COP21 provided a historic push for clean energy
 - *Start of a new era of collaboration: Country-based approaches preferred to top-down regulation*
 - *New goals put forward – going beyond what everyone already considered challenging when our first ETP was released in 2006*
- Growing recognition that greater innovation is essential to meet ambitious climate goals

The scale of the challenge

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Contribution of technology area to global cumulative CO₂ reductions

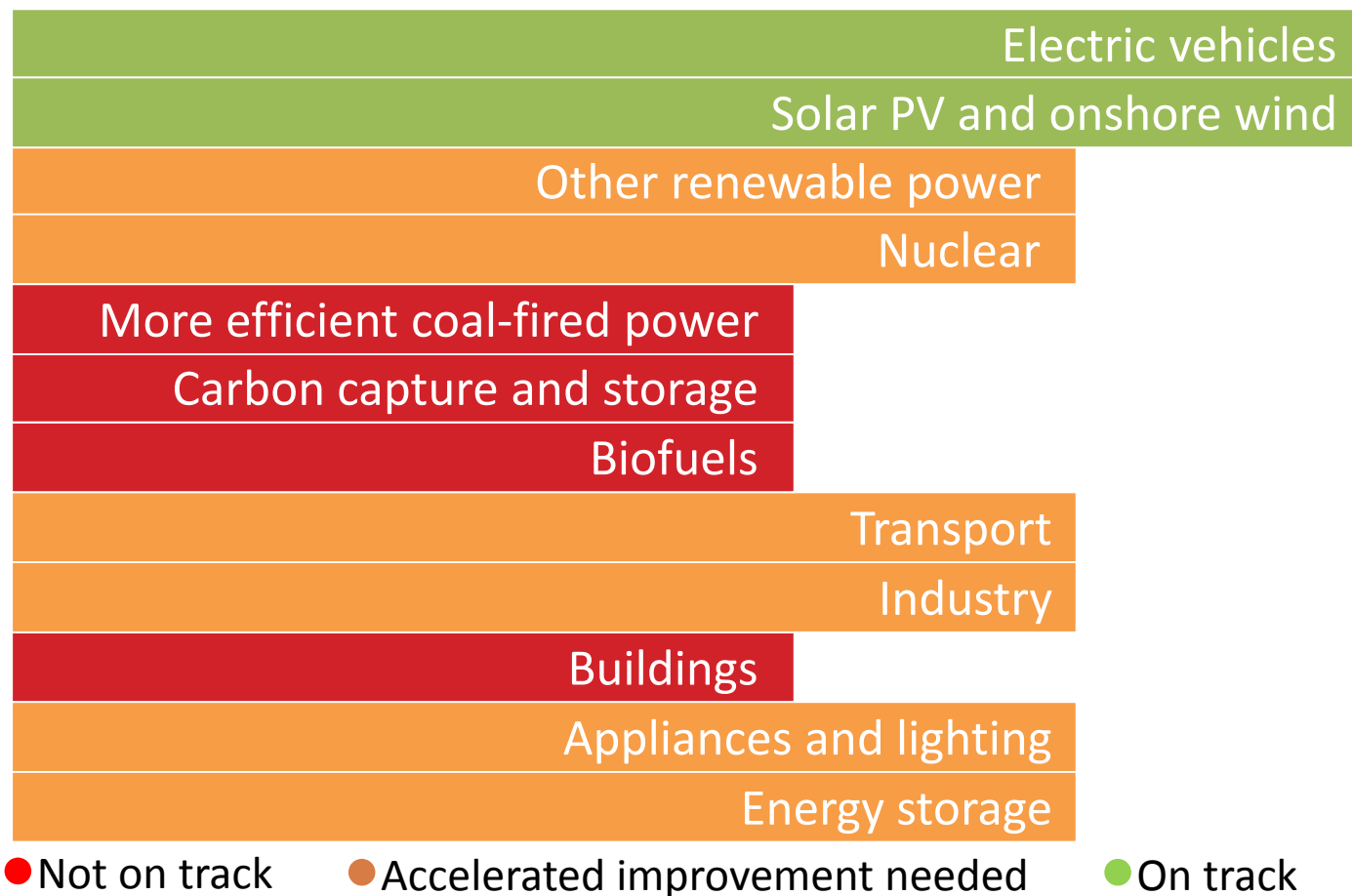


The carbon intensity of the global economy can be cut by two-thirds through a diversified energy technology mix

Global progress in clean energy needs to accelerate

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Technology Status today against 2DS targets

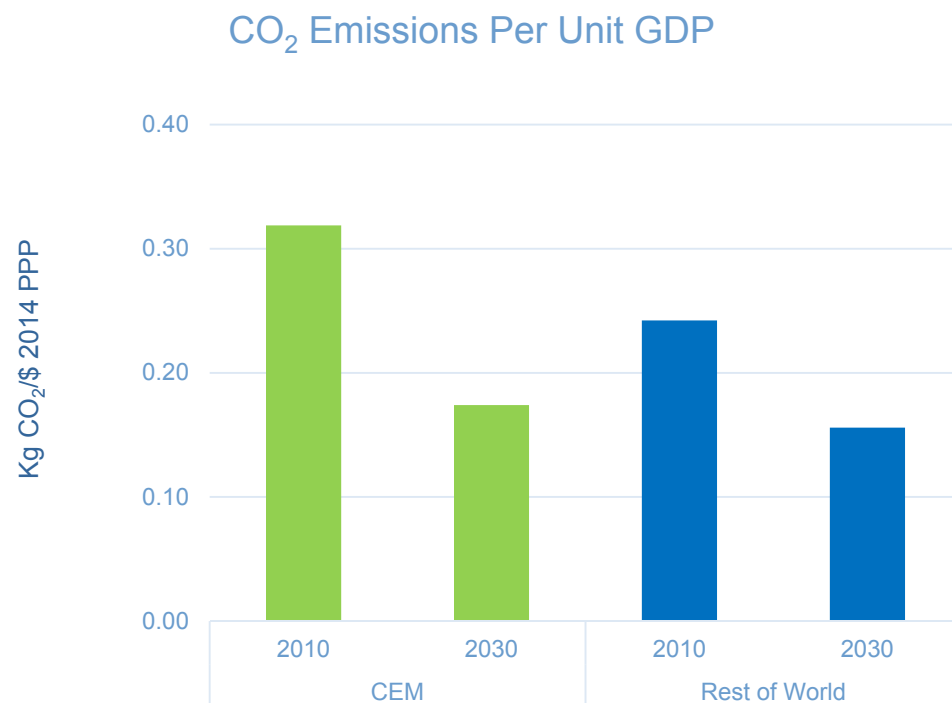


Global clean energy deployment is still overall behind what is required to meet the 2°C goal, but recent progress on electric vehicles, solar PV and wind is promising

Targets have been agreed upon

World
Outlook Energy
2015

INDC Analysis of Global Carbon Intensity

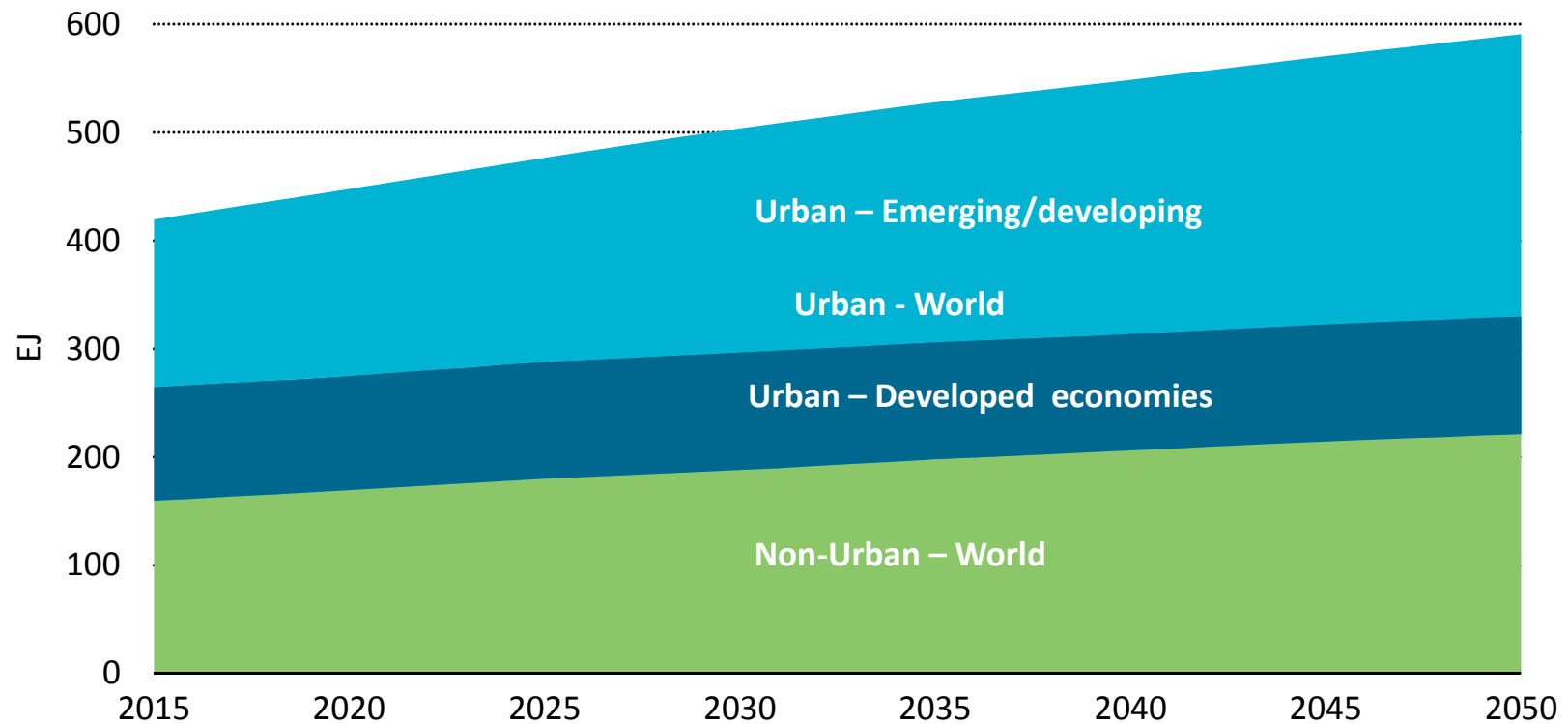


By 2030, CEM INDCs would increase solar PV generation by 30x and wind by 7x, and would cut CO₂ intensity by 45%

Cities in emerging/developing economies will be critical

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Final energy demand in the 4DS



Two-thirds of the growth in global energy demand to 2050 comes from cities in emerging and developing economies

- COP21 was historic and a catalyst for more innovation, research and investment in clean energy technologies
- 2015 saw progress in solar PV, wind and electric vehicles, but other areas such as CCS and biofuels are lagging behind
- Cities in emerging and developing economies can lead the low-carbon transition while reaping many benefits
- Efficient heating & cooling systems, better public transport and electric vehicles will be critical to decarbonise cities
- Acting together with industry, national and local governments can drive innovation through international co-operation

ETP2016: Towards Sustainable Urban Energy Systems

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- Part 1: Setting the Scene
 - Global Outlook
 - Tracking Clean Energy Progress
- Part 2: Towards Sustainable Urban Energy Systems
 - The Urban Energy Challenge
 - Energy-efficient Buildings in the Urban Environment
 - Sustainable Urban Transport
 - Energy Supply in Cities
 - Policy and Finance Mechanisms for Urban Areas
 - Mexico's Sustainable Energy Transition: The Role of Cities?

