9 March 2016

ENERGY IN TRANSITION

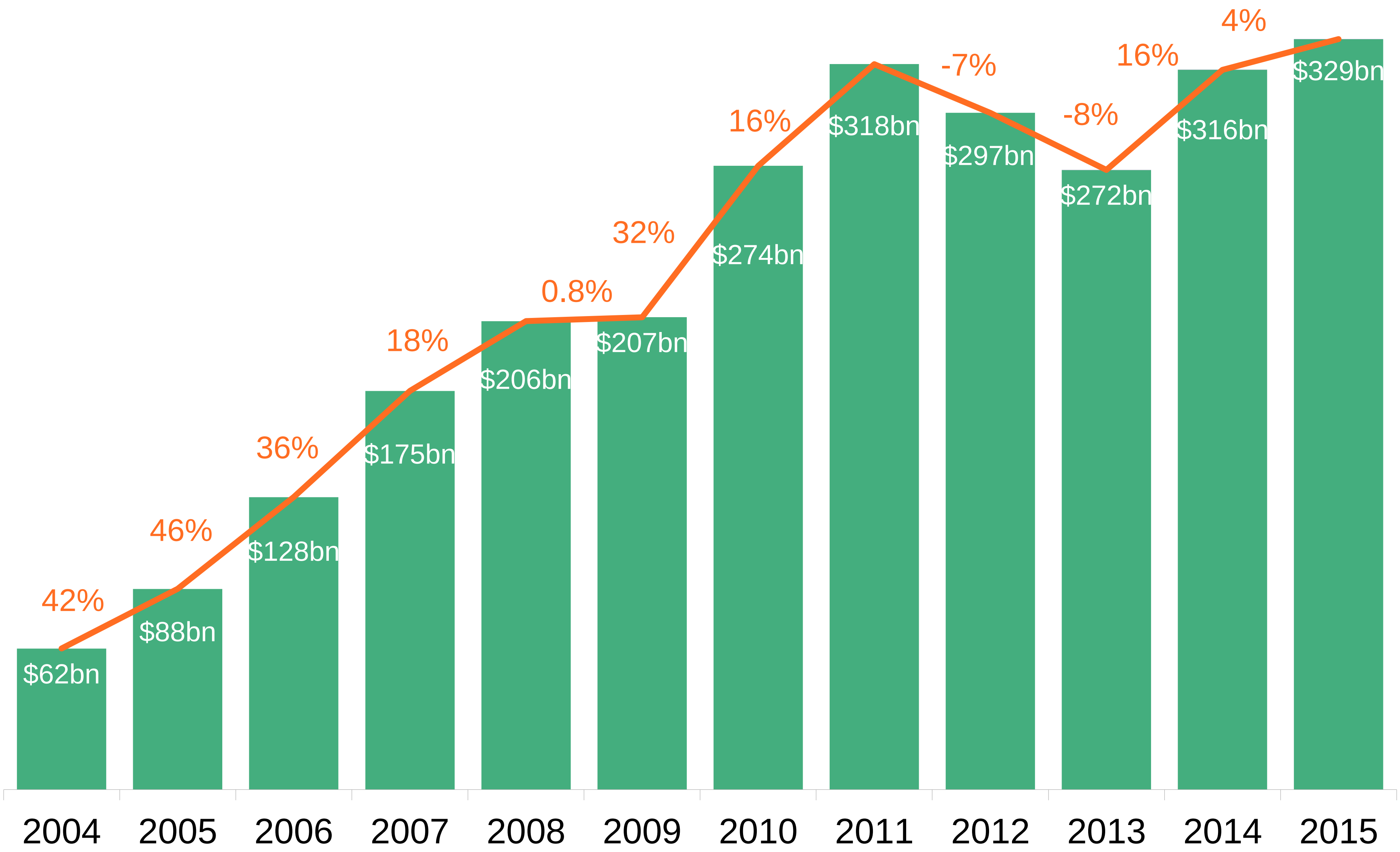
REvision 2016

Ali Izadi

Bloomberg
NEW ENERGY FINANCE

NEW INVESTMENT IN CLEAN ENERGY 2004 – 2015 ($BN)

Bloomberg NEW ENERGY FINANCE



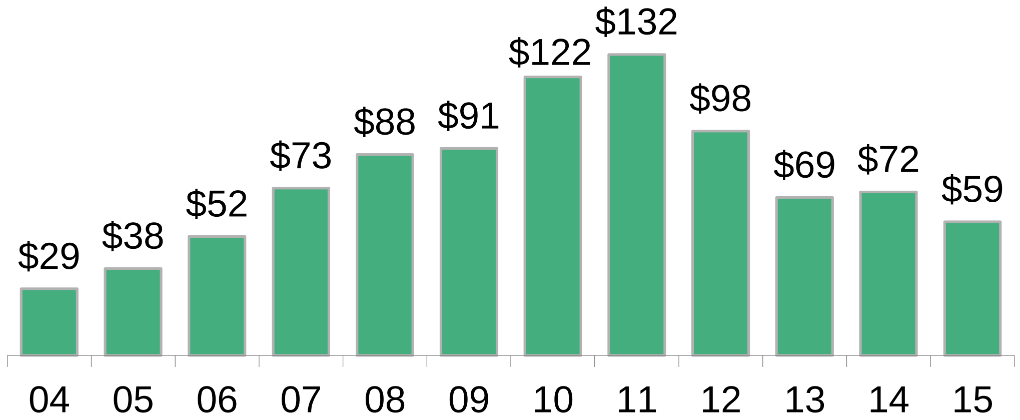
Note: Total values include estimates for undisclosed deals. Includes corporate and government R&D, and spending for digital energy and energy storage projects (not reported in quarterly statistics).

Source: Bloomberg New Energy Finance

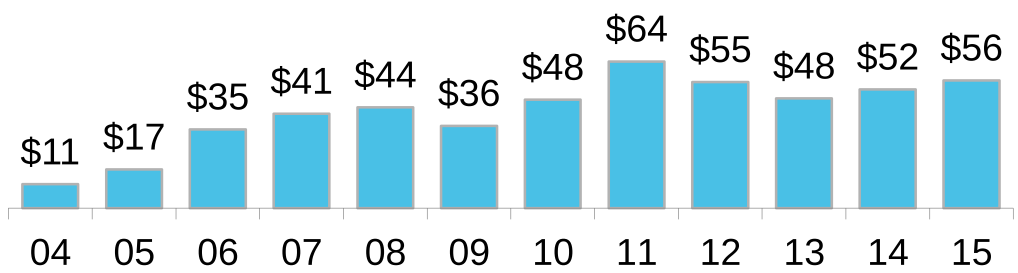
CLEAN ENERGY INVESTMENT BY REGION
2004 – 2015 ($BN)

Bloomberg NEW ENERGY FINANCE

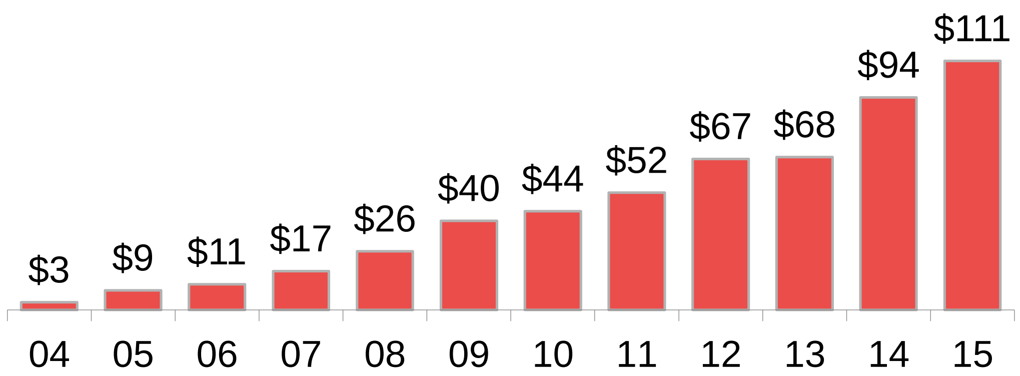
Europe



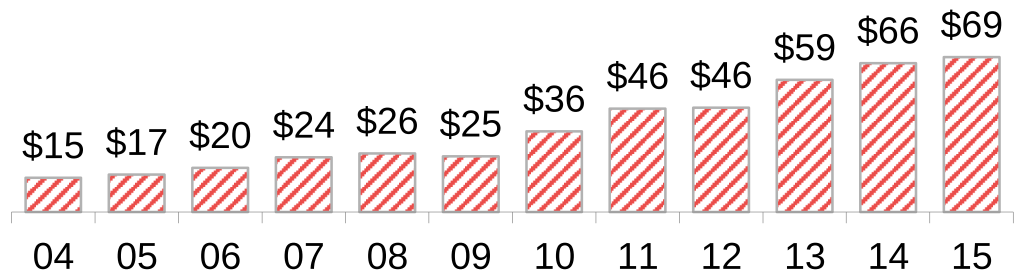
United States



China



Asia ex-China

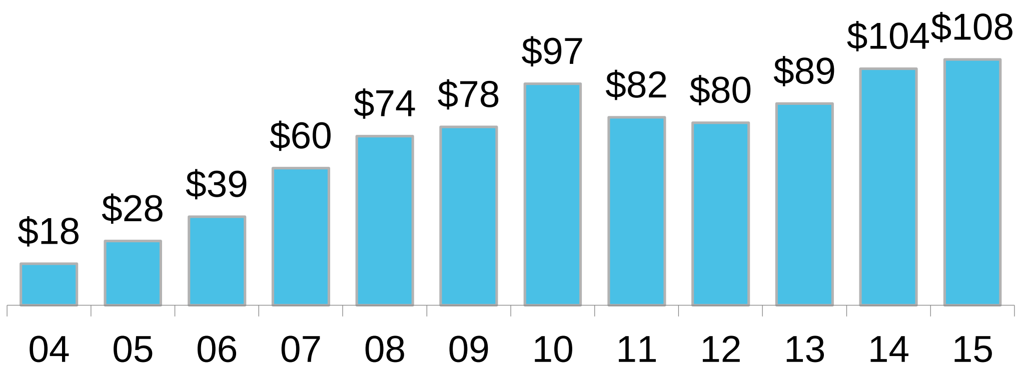


Source: Bloomberg New Energy Finance

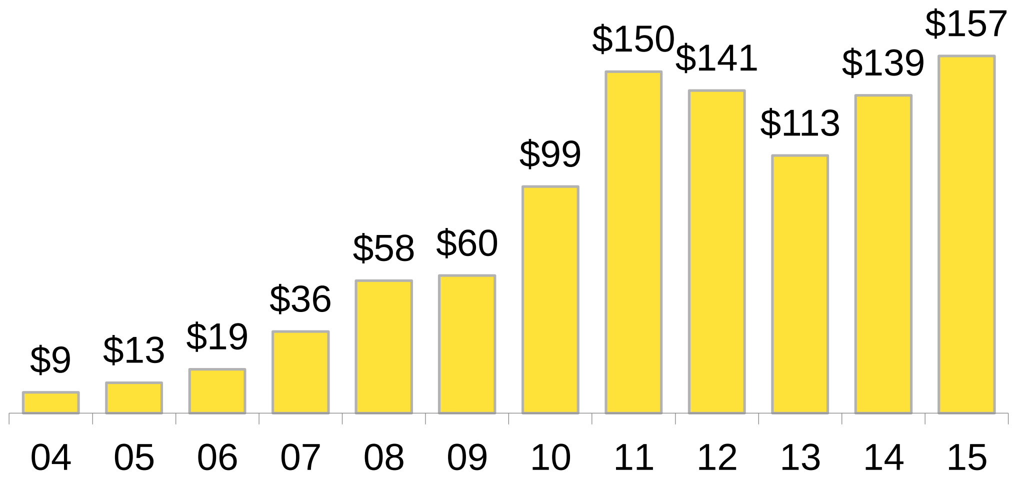
CLEAN ENERGY INVESTMENT BY SECTOR 2004 – 2015 ($BN)

Bloomberg NEW ENERGY FINANCE

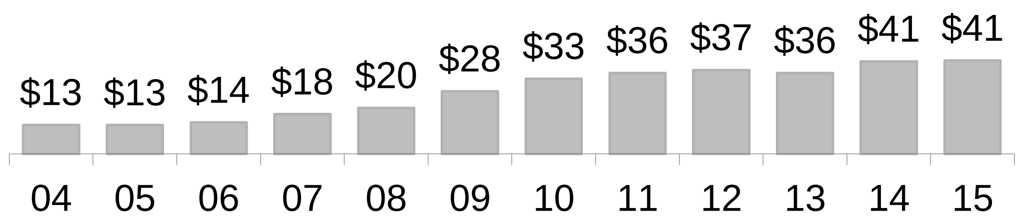
Wind



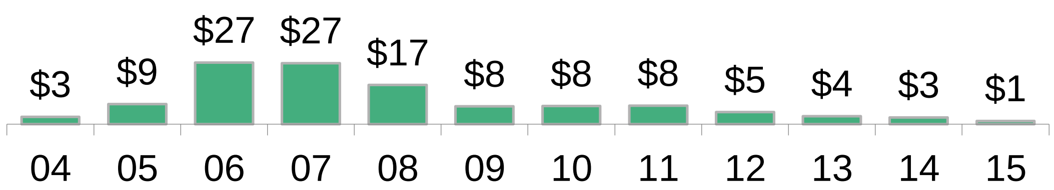
Solar



Energy Smart Technologies (EST)



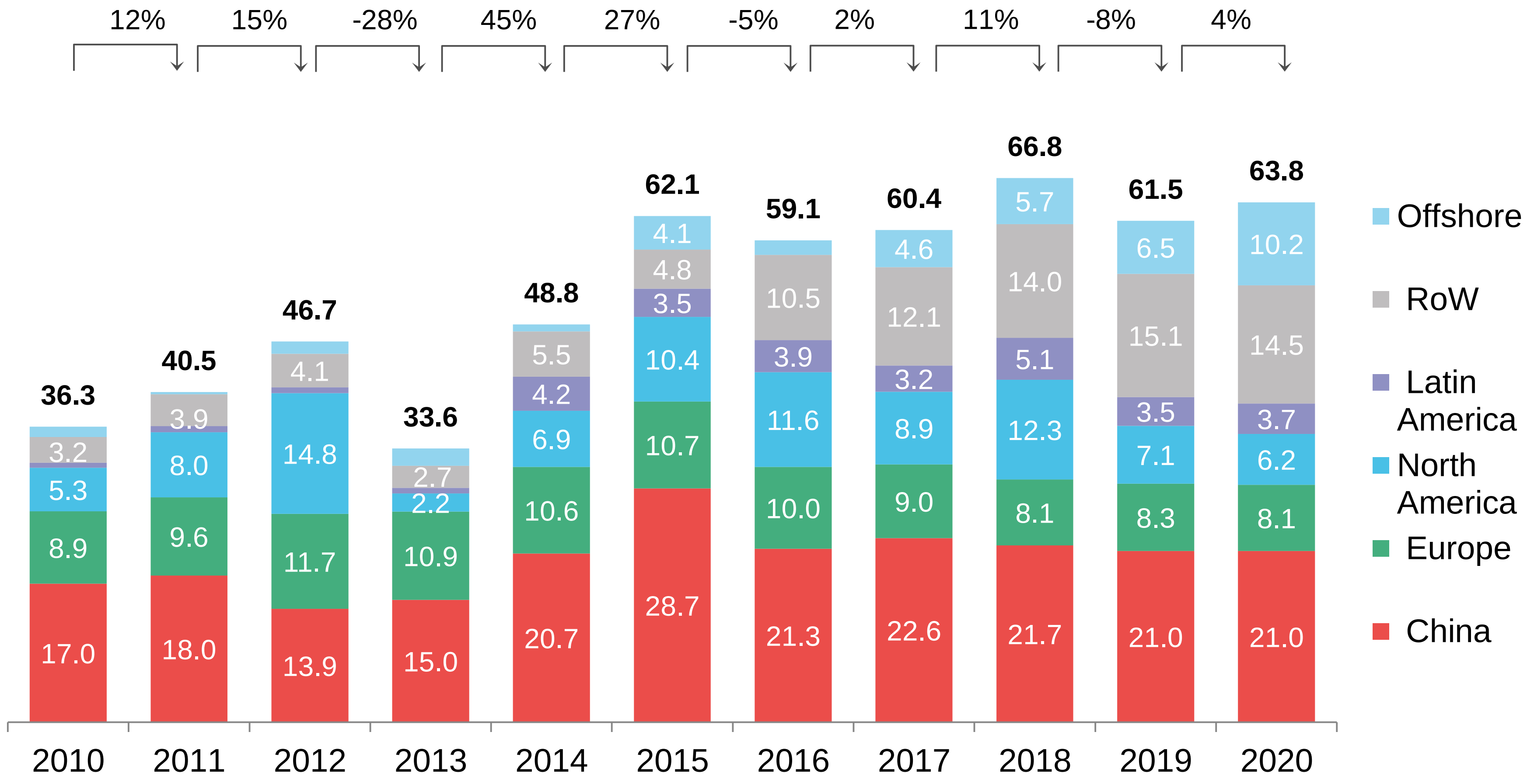
Biofuels



Source: Bloomberg New Energy Finance

SHORT-TERM NEW WIND BUILD FORECAST
ANNUAL WIND INSTALLATIONS BY REGIONS, INCLUDING OFFSHORE WIND, 2010–20E (GW)

Bloomberg NEW ENERGY FINANCE



Source: Bloomberg New Energy Finance

PV NEW BUILD BY YEAR, HISTORICAL AND FORECAST TO 2018 (CONSERVATIVE)

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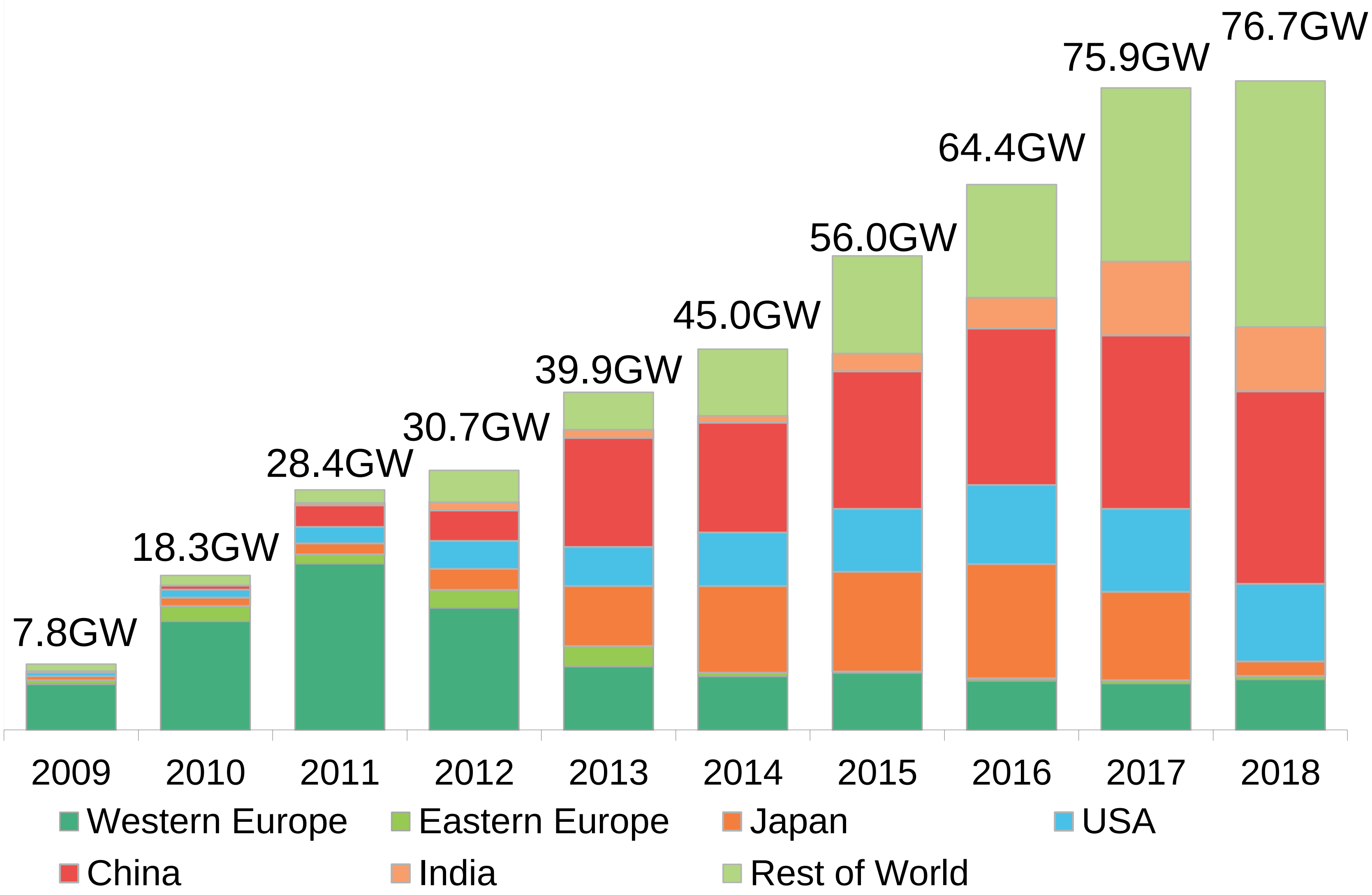

Note: A conservative and optimistic forecast has been developed for each country. It is unlikely that all countries will come in at the conservative or optimistic end, so for the global forecast, conservative is (sum of conservative country forecasts + 25%*(sum of optimistic – conservative forecasts). Global optimistic forecast is sum of conservative country forecasts + 75%*(sum of optimistic – conservative forecasts).

Source: Bloomberg New Energy Finance

COAL NEWCASTLE PRICE, 2011-2017E

Note: dashed portion is the forward price

Source: Bloomberg

NATURAL GAS AND LNG REFERENCE PRICES

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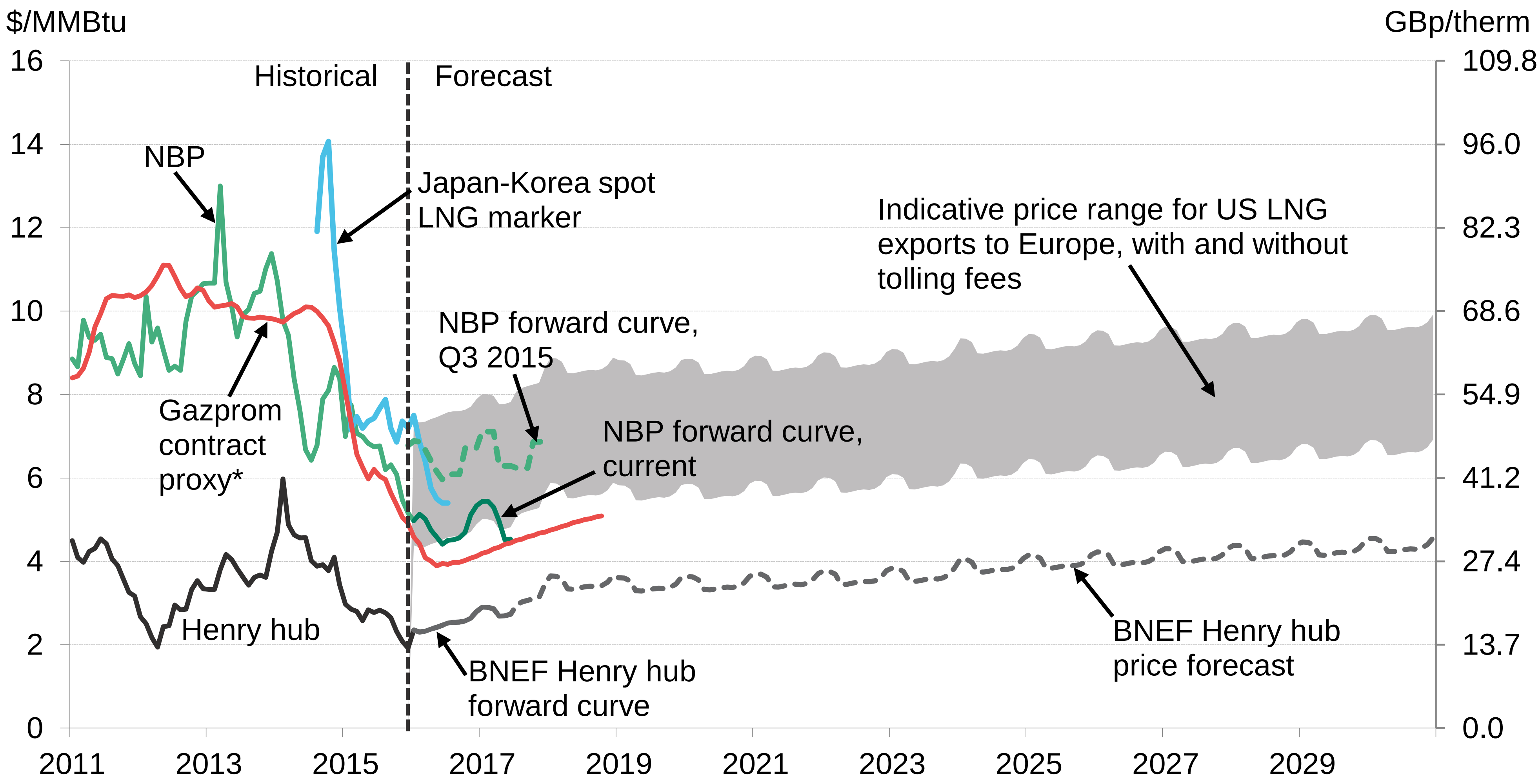

Source: Bloomberg New Energy Finance

OECD VS NON-OECD CUMULATIVE CAPACITY, 2012-40 (GW)

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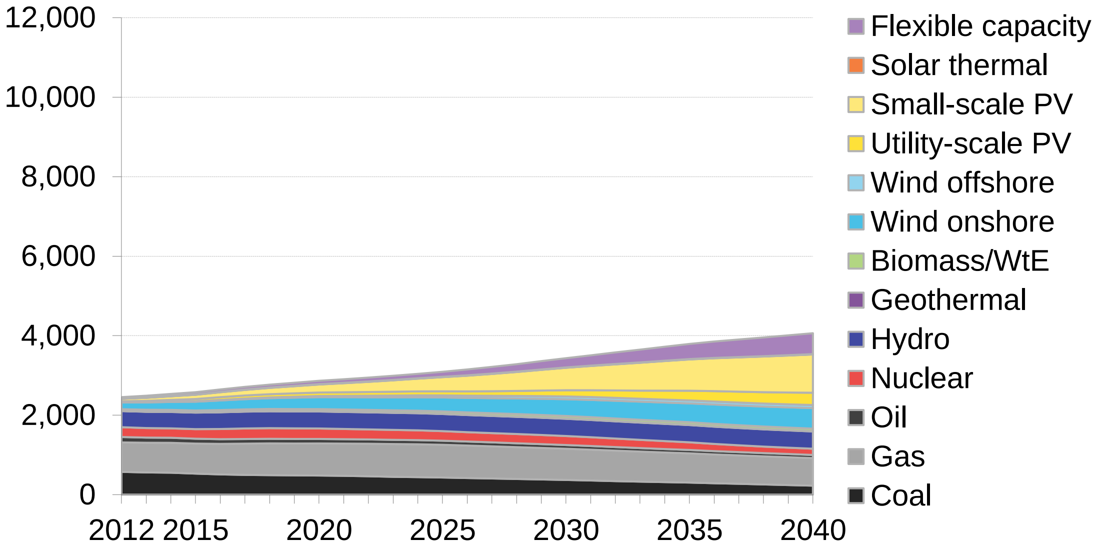
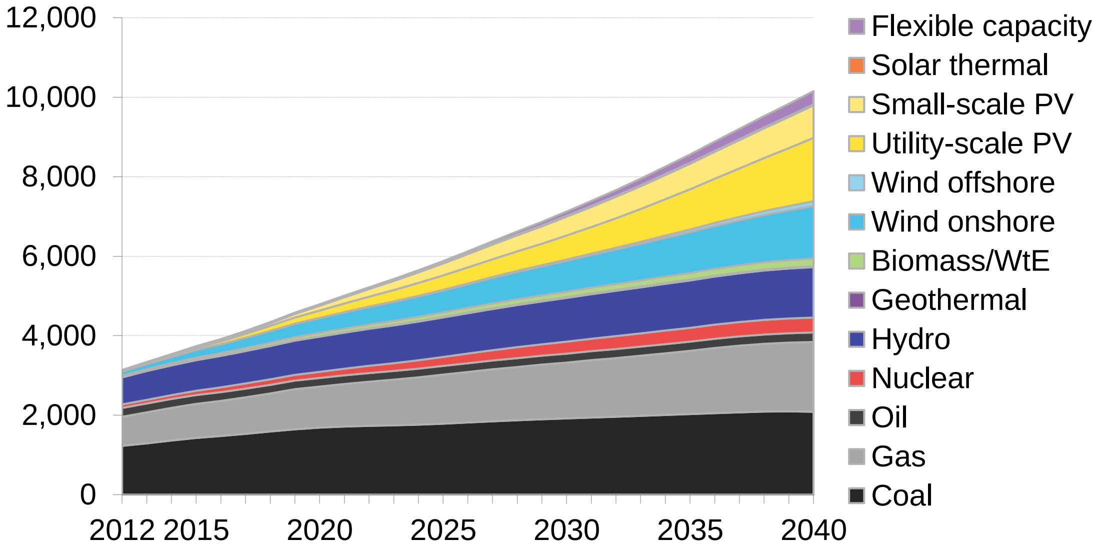
OECD



NON-OECD



Source: Bloomberg New Energy Finance

GLOBAL POWER GENERATION BY TECHNOLOGY, 2012-40 (TWH)

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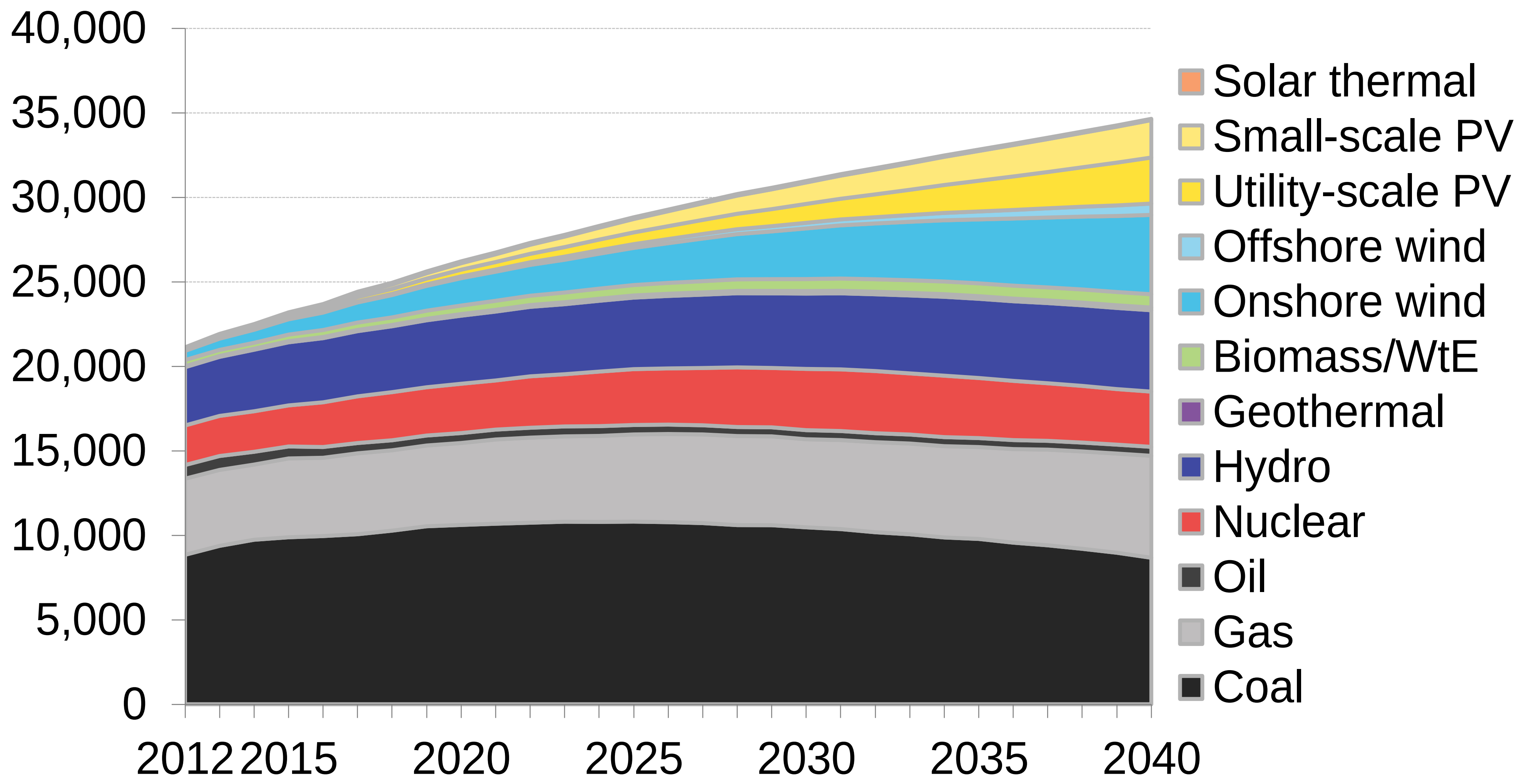
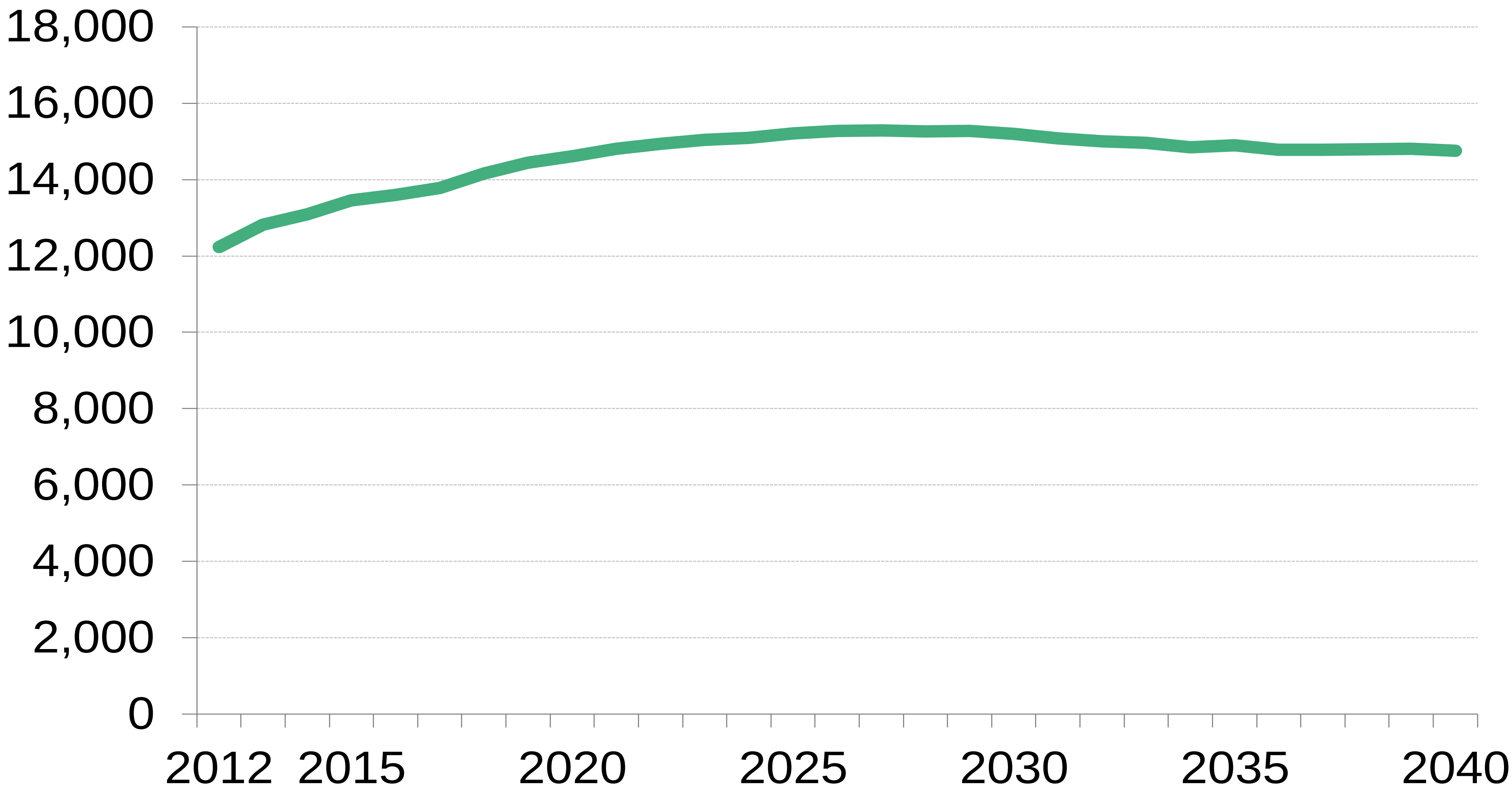


Source: Bloomberg New Energy Finance

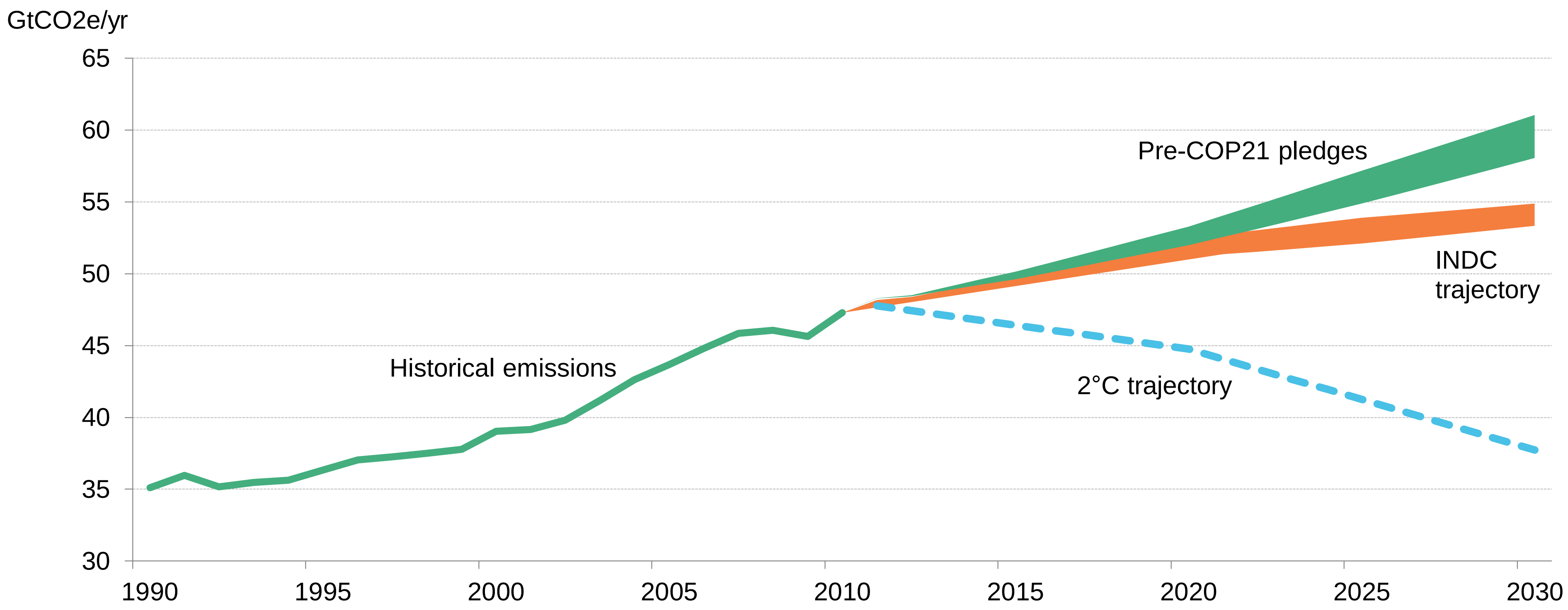
GLOBAL POWER SECTOR CO_2 EMISSIONS, 2012-40 (MTCO2E)



Source: Bloomberg New Energy Finance

THE INTENDED NATIONALLY DETERMINED CONTRIBUTIONS (INDCS) DON'T GET YOU TO 2°C

- Over 160 countries that together account for 95% of global emissions have submitted their INDCs to the UN ahead of Paris.
- The estimated impact of the pledges made so far is a net reduction of around 5.5GtCO2e/yr by 2030, or a cumulative reduction of 37Gt over 2016-30.
- This is not enough to put the world on a 2°C trajectory, which would require further reductions of 15-20Gt/yr by 2030.
- According to the IPCC, the world's remaining 'carbon budget' is around 1,000GtCO2e. Even if the INDCs are implemented, the budget is likely to be exhausted by mid-century.



Note: 'INDC' refers to intended nationally determined contributions submitted by countries to the UNFCCC as part of the Durban Platform negotiations – INDCs represent a country's post-2020 low carbon and emission reduction targets

Source: Bloomberg New Energy Finance, UNFCCC, UNEP

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driving change in the energy system

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