

19 May 2015

SMART GRIDS IN THE ASIA-PACIFIC

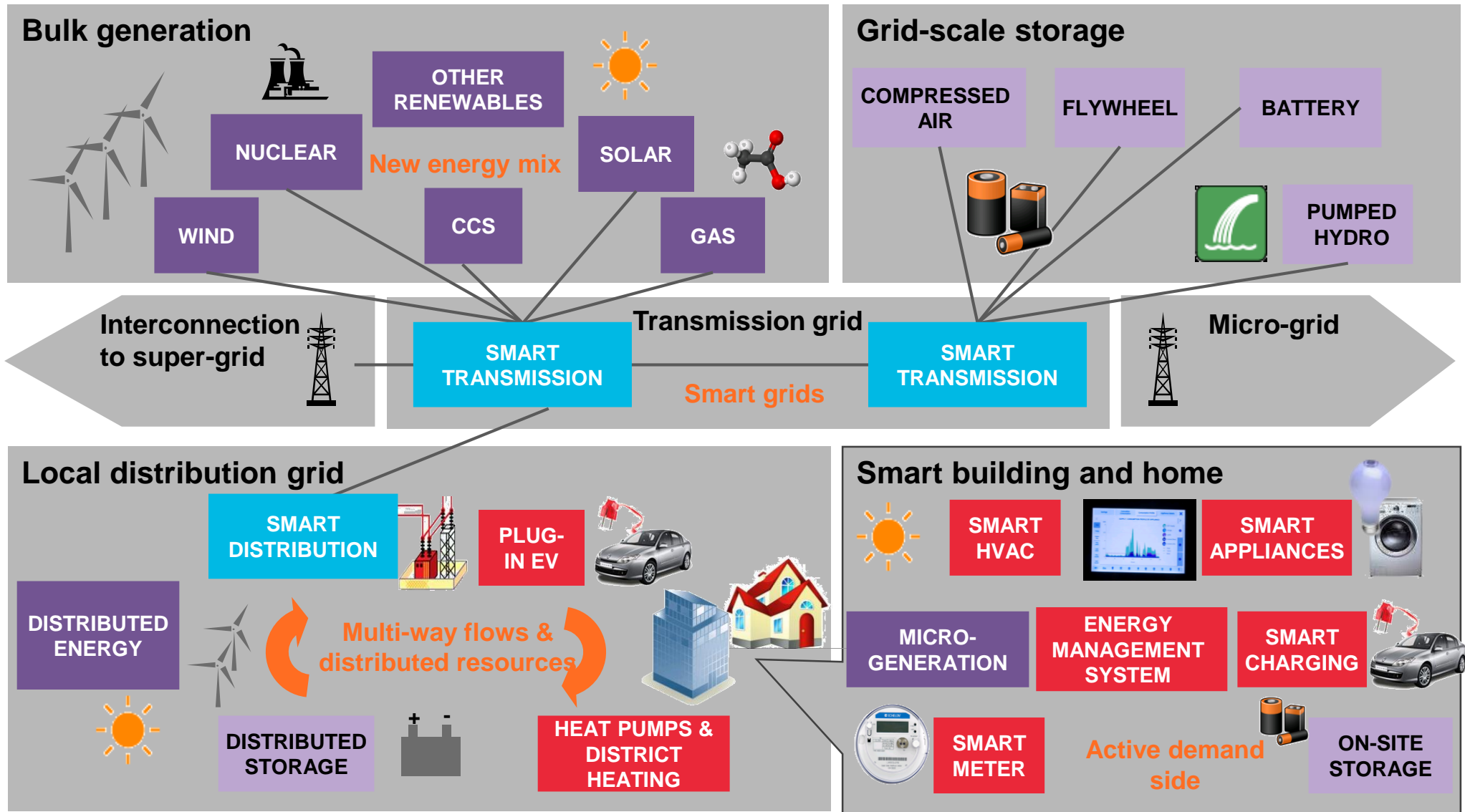
Prepared for ADB Knowledge
Partnership Week

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Bloomberg
NEW ENERGY FINANCE

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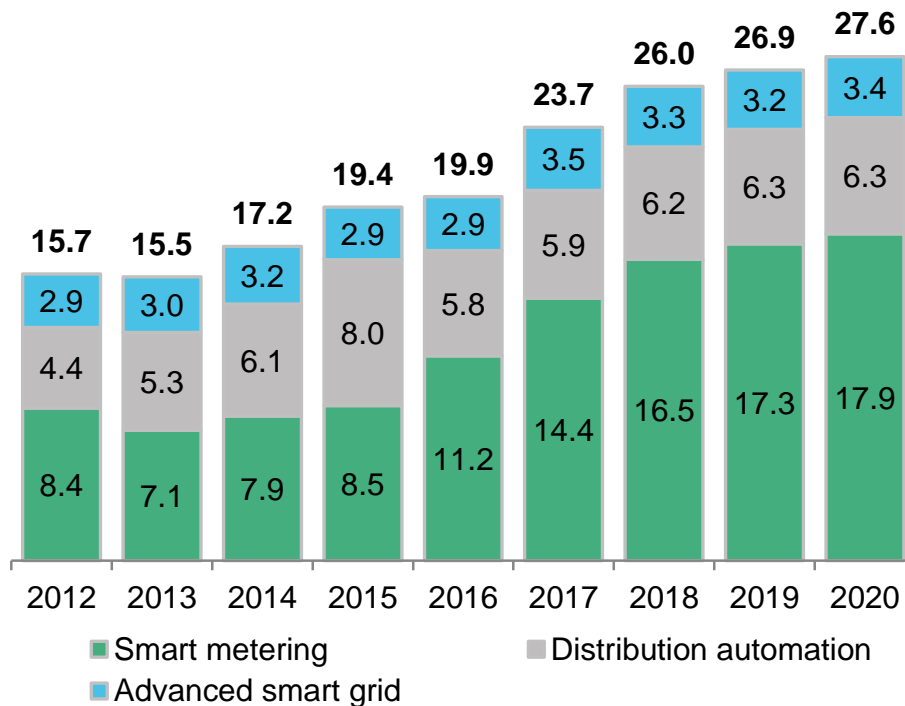
THE SMART ENERGY SYSTEM OF THE FUTURE



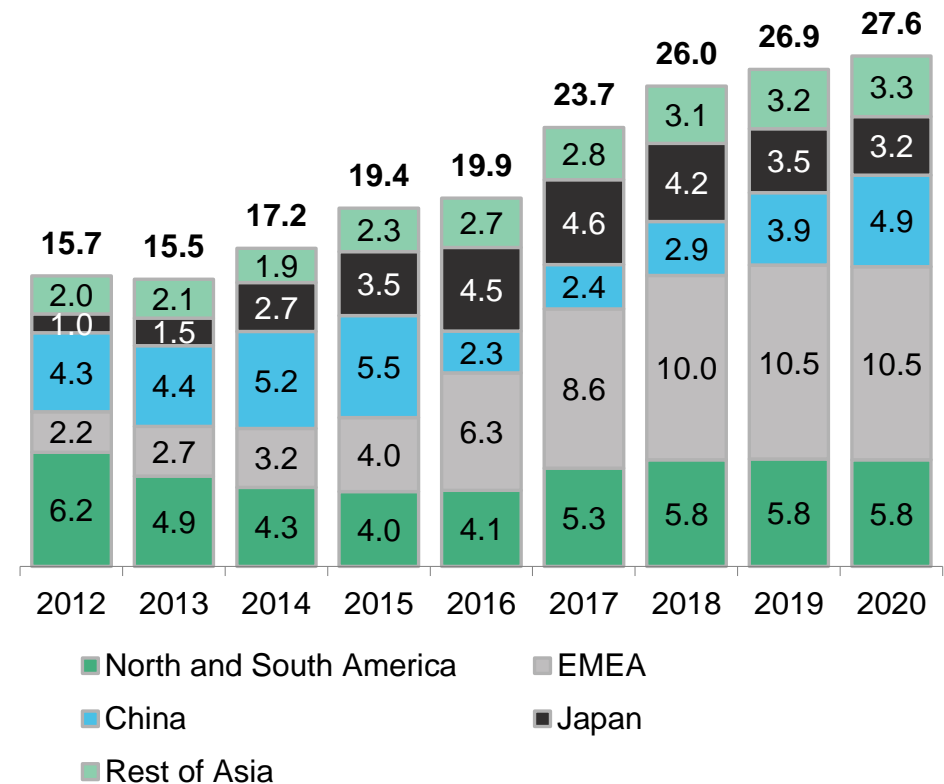
Source: Bloomberg New Energy Finance

GLOBAL SMART GRID SPENDING, 2012-20E (\$BN)

BY SPENDING CATEGORY



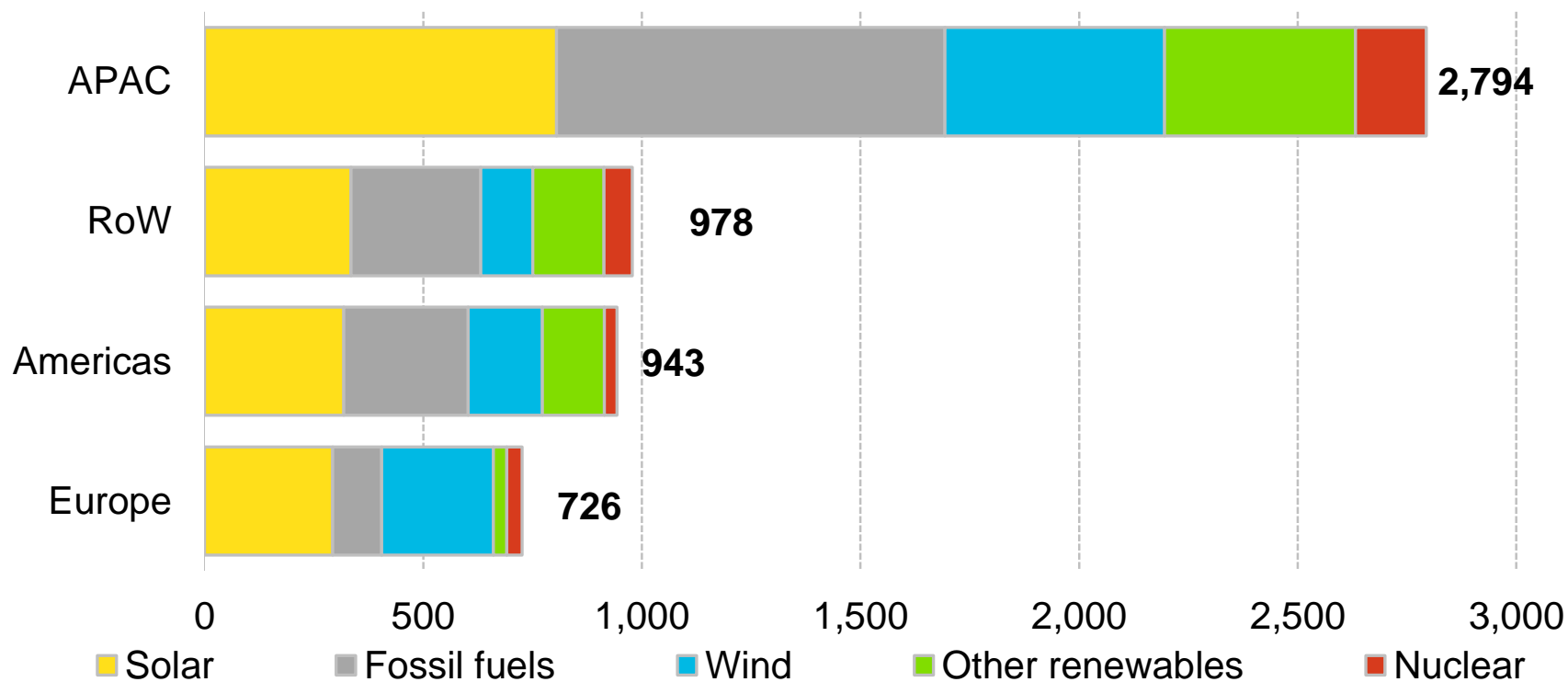
BY REGION



Note : We have changed our methodology slightly since our last global forecast update – smart gas meters and synchrophasors are now included. Smart meters in China are now assumed to be installed the same year they are procured, this has led to changes to historical spending figures for China that also impacts the world total. 2013 now appears lower than 2012 because of these increases to China’s spending in 2012. Click [here](#) for supporting numbers.

Source: Bloomberg New Energy Finance

GROSS CAPACITY ADDITIONS BY REGION AND BY TECHNOLOGY, 2013-30 (GW)

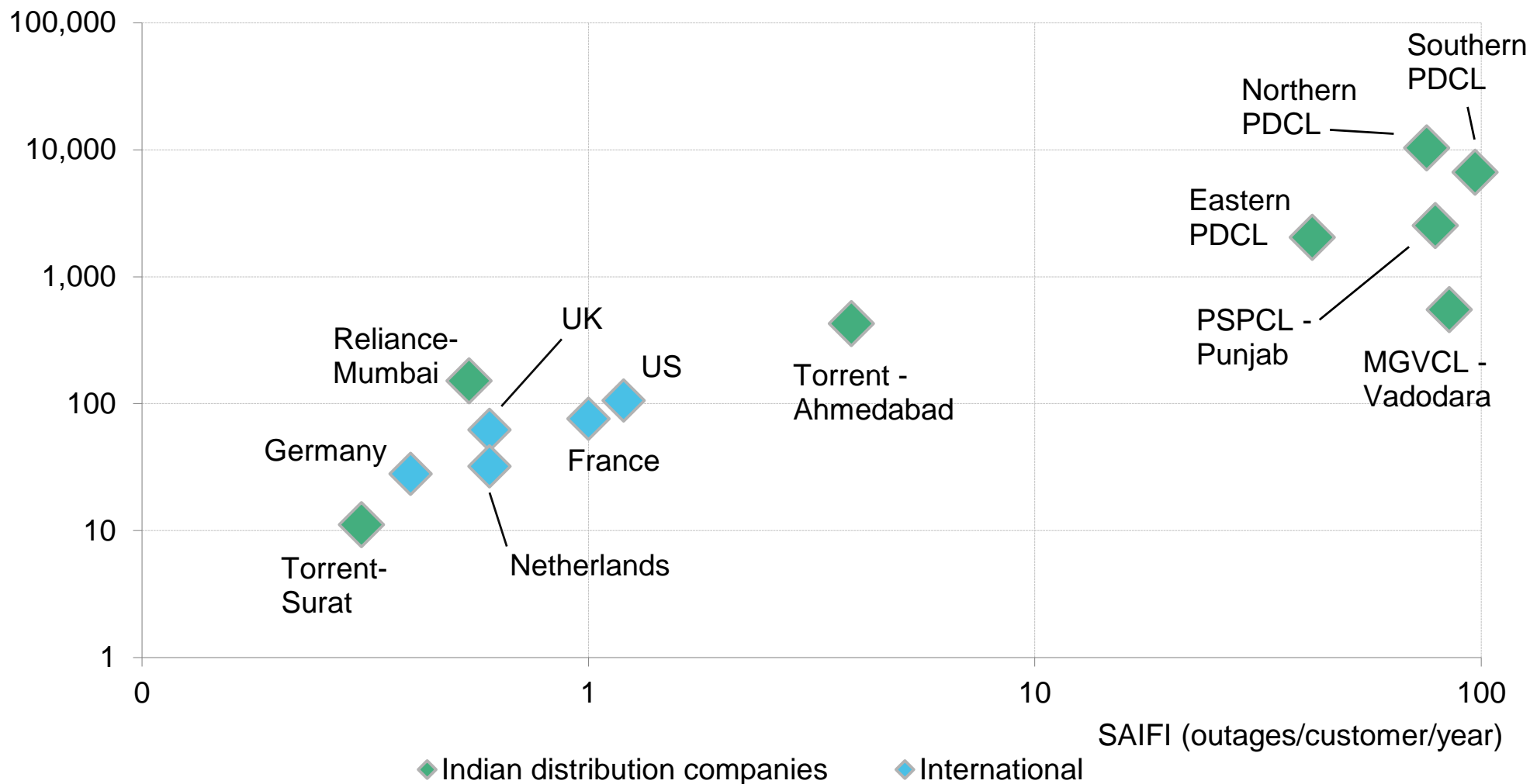


Note: Figure excludes other and flexible capacity.

Source: Bloomberg New Energy Finance

GRID RELIABILITY INDICES FOR SELECTED INDIAN DISTRIBUTION COMPANIES AND COUNTRIES

SAIDI
(minutes/customer/year)

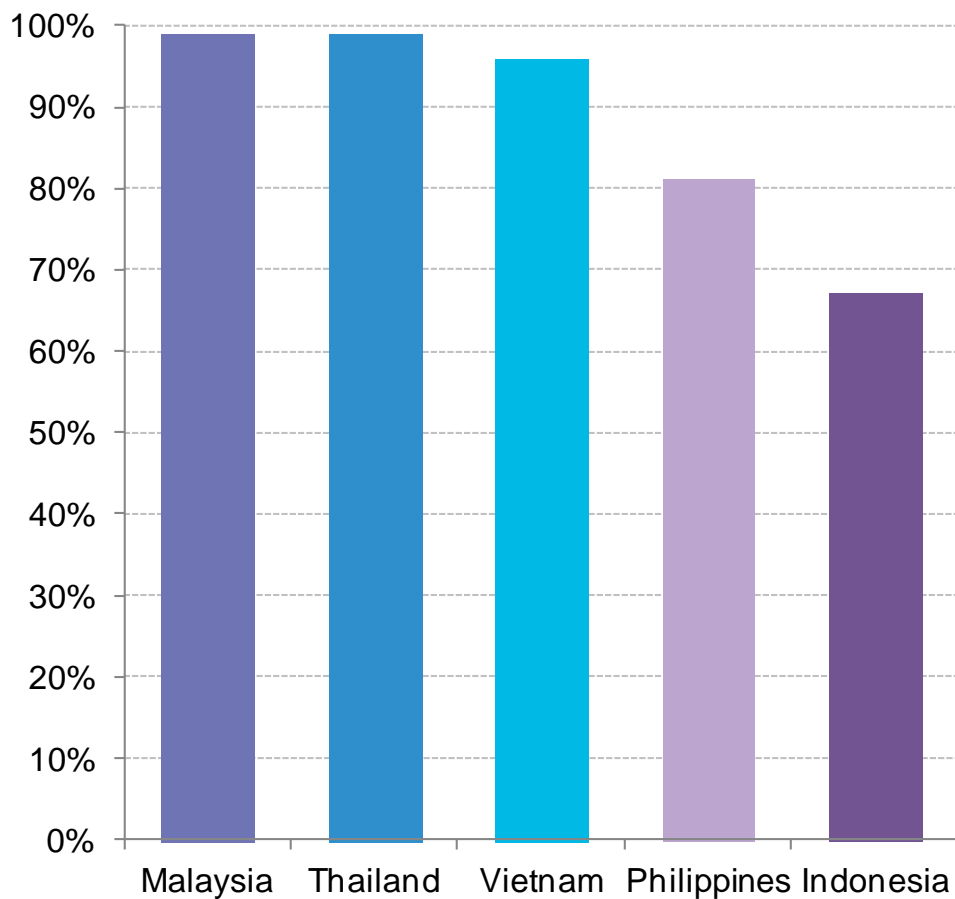


Note: Log scale for both axes. SAIDI/SAIFI = system average interruption duration/frequency index. International data is for 2012/13. Indian data is for 2013/14.

Source: CEER, EIA, Power Systems Corporation of India, Relevant Indian State Regulatory Commissions.

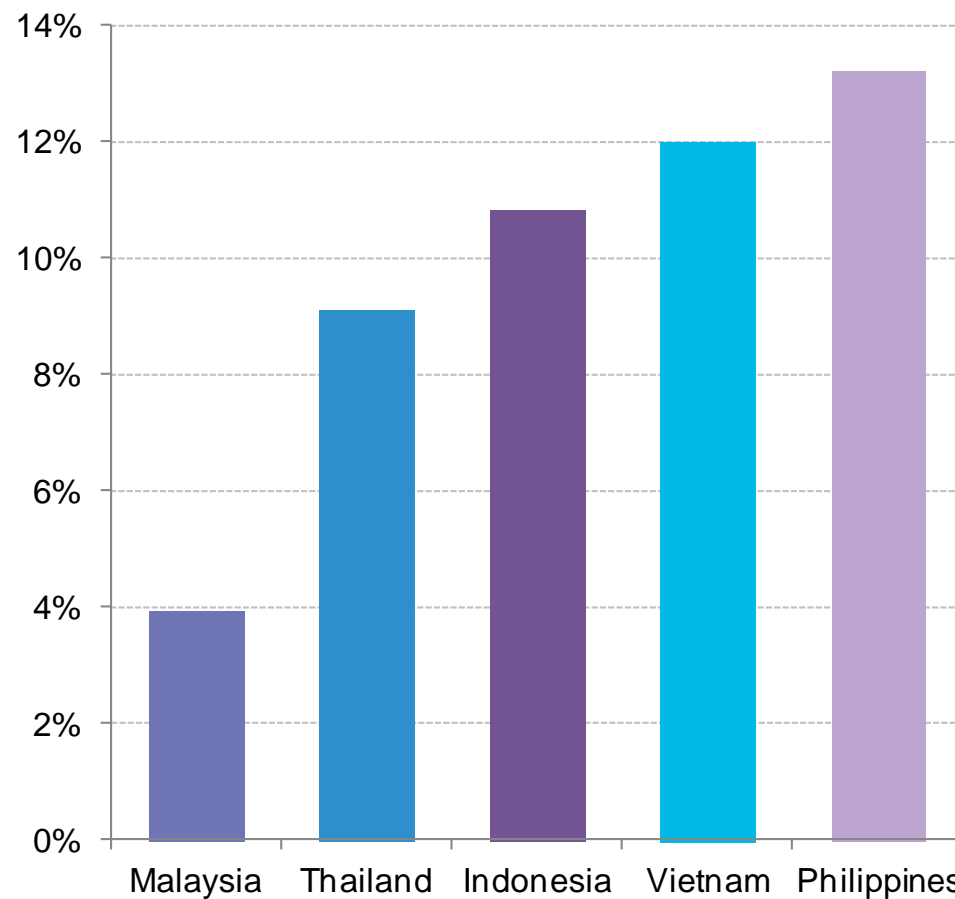
DRIVERS FOR SMART GRID DEPLOYMENT IN SE ASIA: CURRENT GRID PERFORMANCE

ELECTRIFICATION RATE (%)



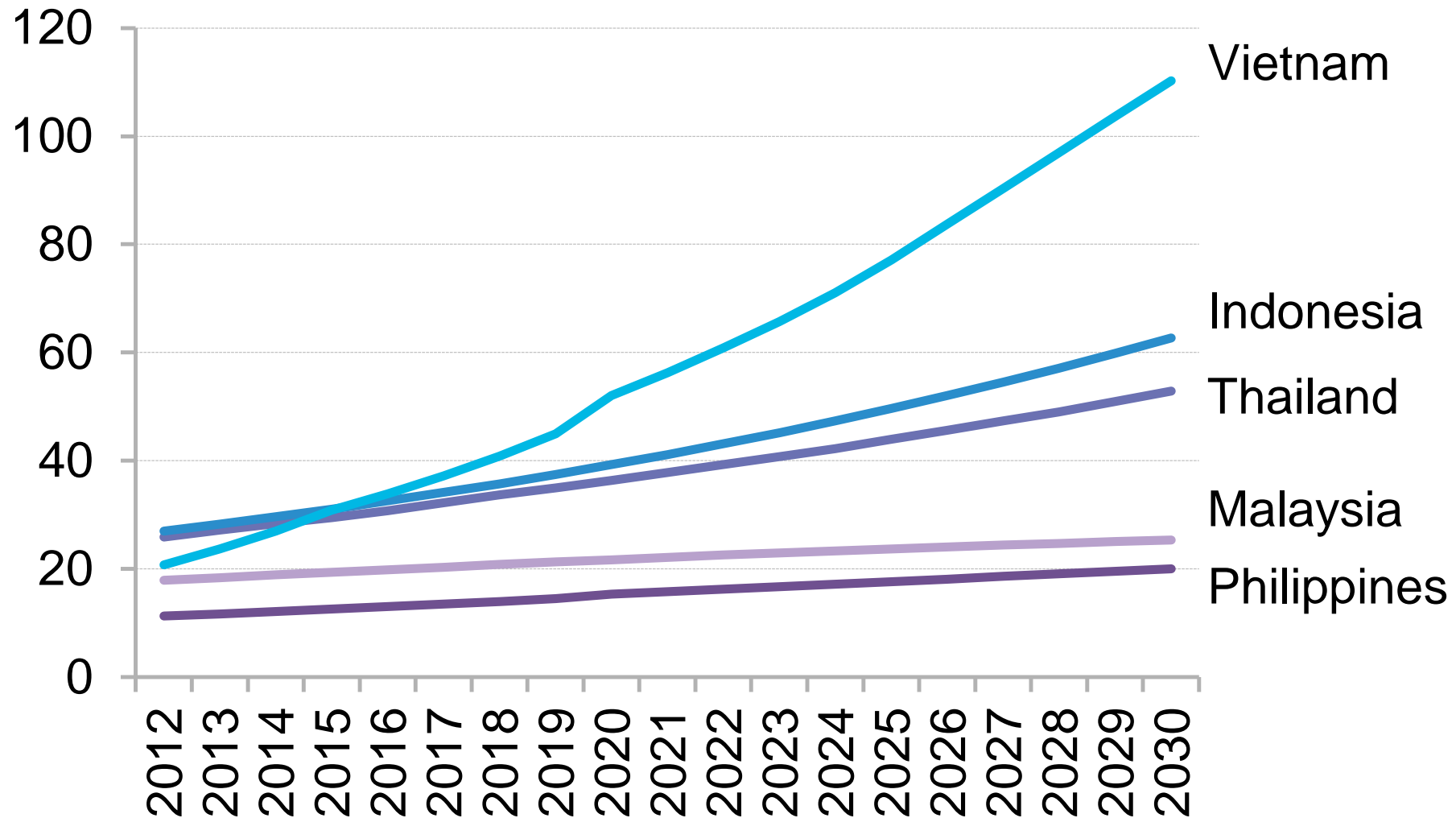
Source: The World Bank. Note: Data is for 2010

T&D LOSS (%)



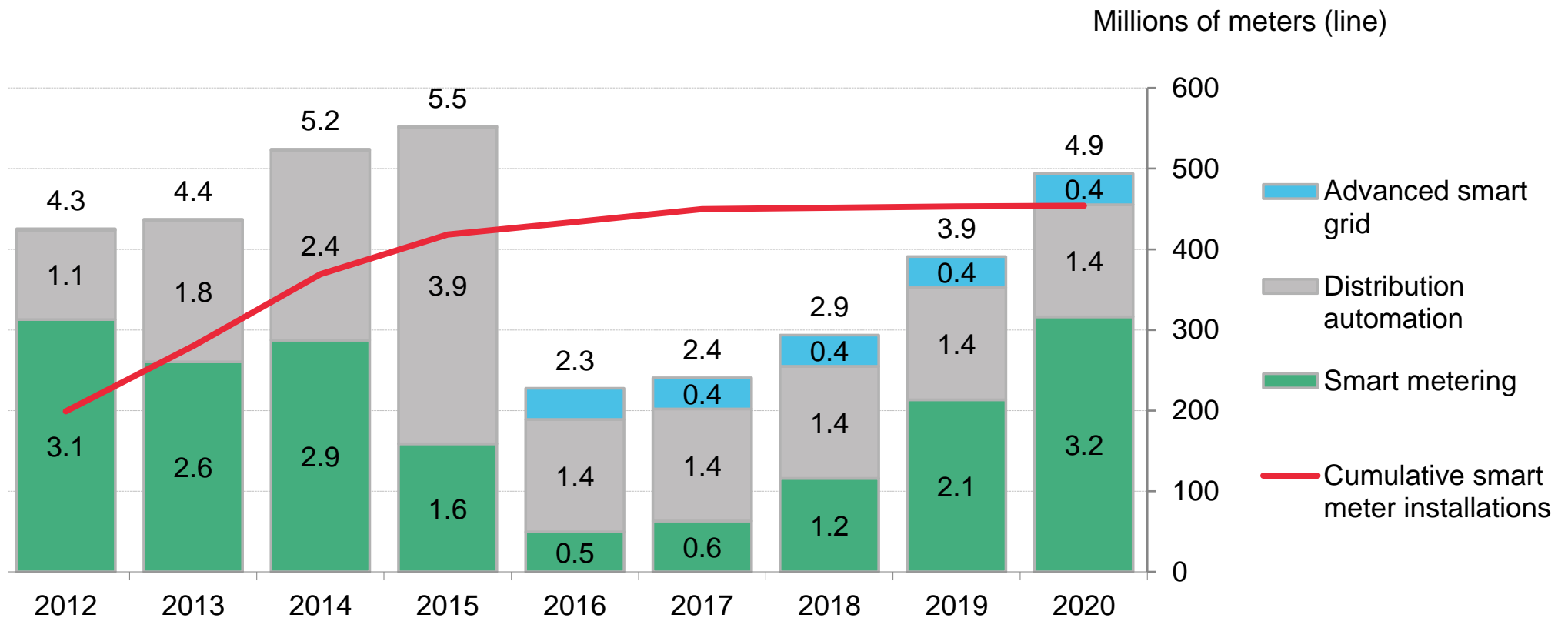
Source: The World Bank. Note: Data is for 2007.

DRIVERS FOR SMART GRID DEPLOYMENT IN SE ASIA: PEAK POWER DEMAND (GW)



Source: Bloomberg New Energy Finance, TDP 2012 of the Philippines, PDP 2012-2030 of Thailand, Power Master Plan 7 of Vietnam.

CHINA SMART GRID SPENDING, 2012-20E (\$BN)

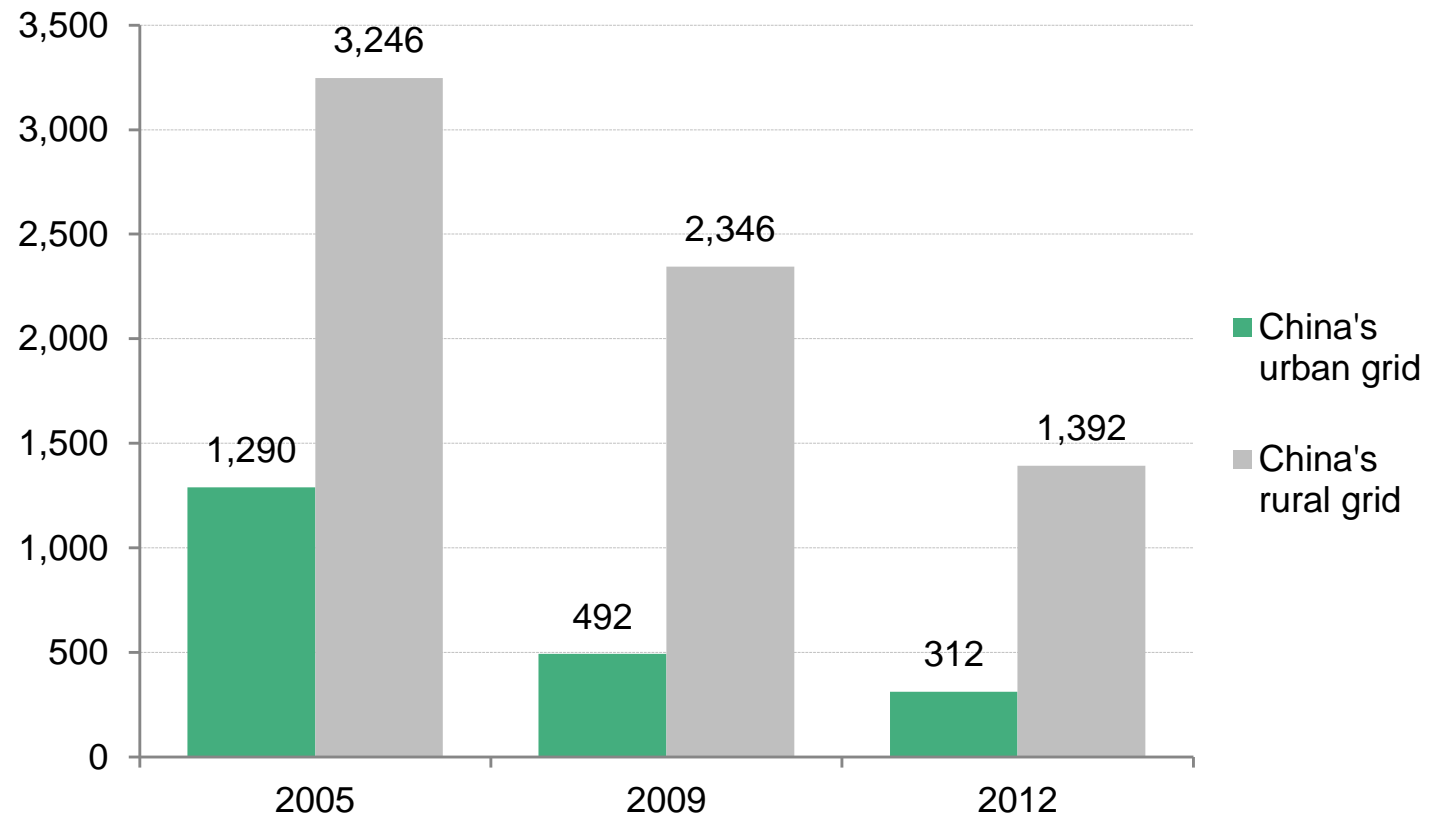


Note: Note: Cumulative meter installed base excludes replacement meters, but these are included in annual market size. All meters are assumed to be installed in the year they were procured. Click [here](#) for supporting numbers.

Source: State Grid Corporation of China; Bloomberg New Energy Finance

AVERAGE MINUTES LOST PER CUSTOMER PER YEAR FOR CHINA AND SELECTED EUROPEAN COUNTRIES, 2005–2012

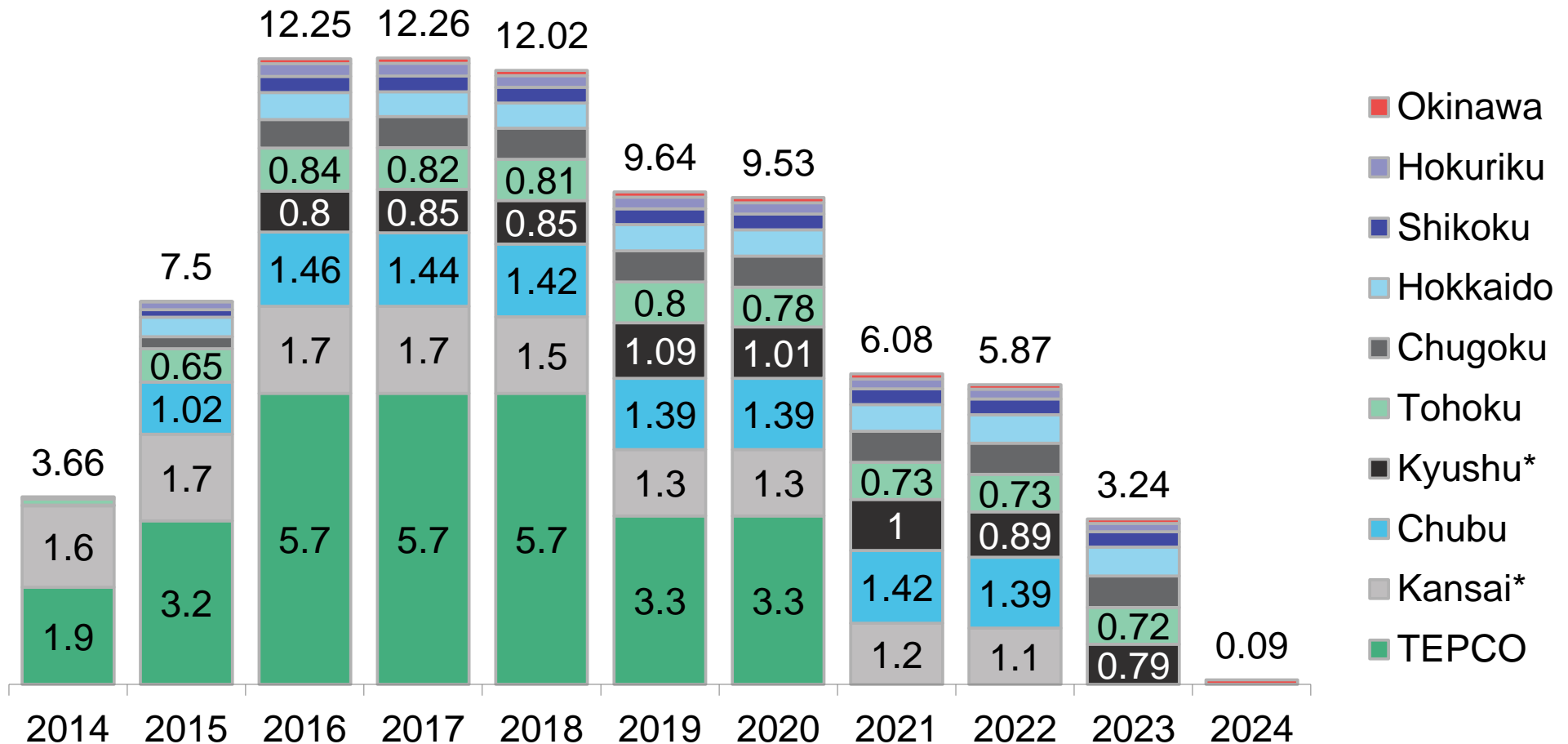
European Country	Average minutes lost, 2005–2012
Germany	16.9
The Netherlands	28.6
Italy	51.4
France	60.9
United Kingdom	69.2
Spain	94.6
Hungary	104.5
Czech Republic	107.5
Lithuania	108.5
Portugal	133.3



Note: Exceptional events (e.g. earthquakes and terrorist attacks) are excluded. Germany is missing 2005 data and Spain is missing 2010, 2012 data.

Source: Council of European Energy Regulators, State Grid Corporation of China, and Bloomberg New Energy Finance

JAPANESE ANNUAL SMART METER DEPLOYMENT BY UTILITY, FY2014-24 (MILLION METERS)



Note: the x-axis shows fiscal year running from April to March. For Kansai Electric's deployment values from FY2018 include replacement of older smart meters, similarly for Kyushu Electric deployment values from FY2020 include replacement of older smart meters. Click [here](#) for supporting numbers.

Source: METI

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