

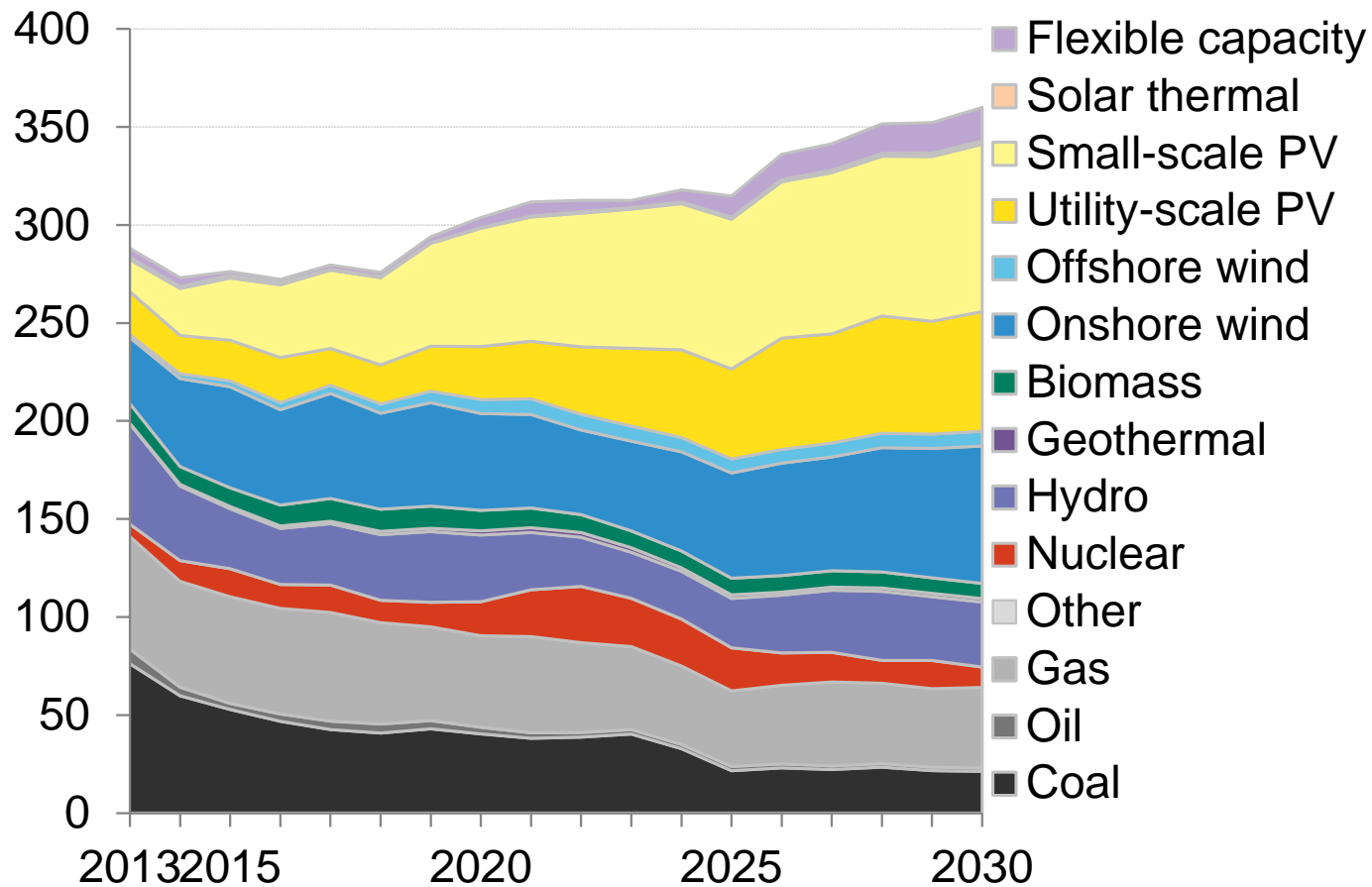


GLOBAL CLEAN ENERGY INVESTMENT TRENDS

ICCR event
February 2015

Bloomberg
NEW ENERGY FINANCE

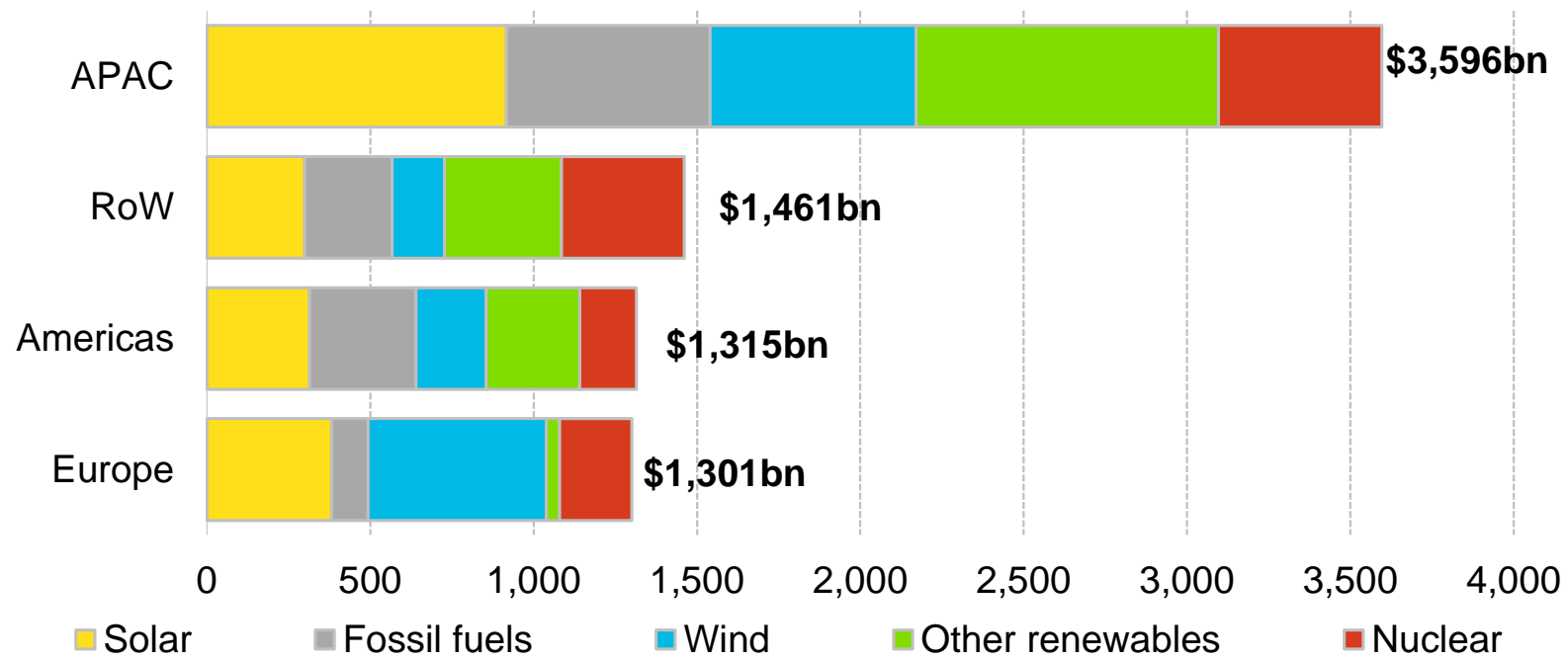
Global gross annual capacity additions by technology, 2013-30 (GW)



Note: Figure excludes retirements

Source: Bloomberg New Energy Finance

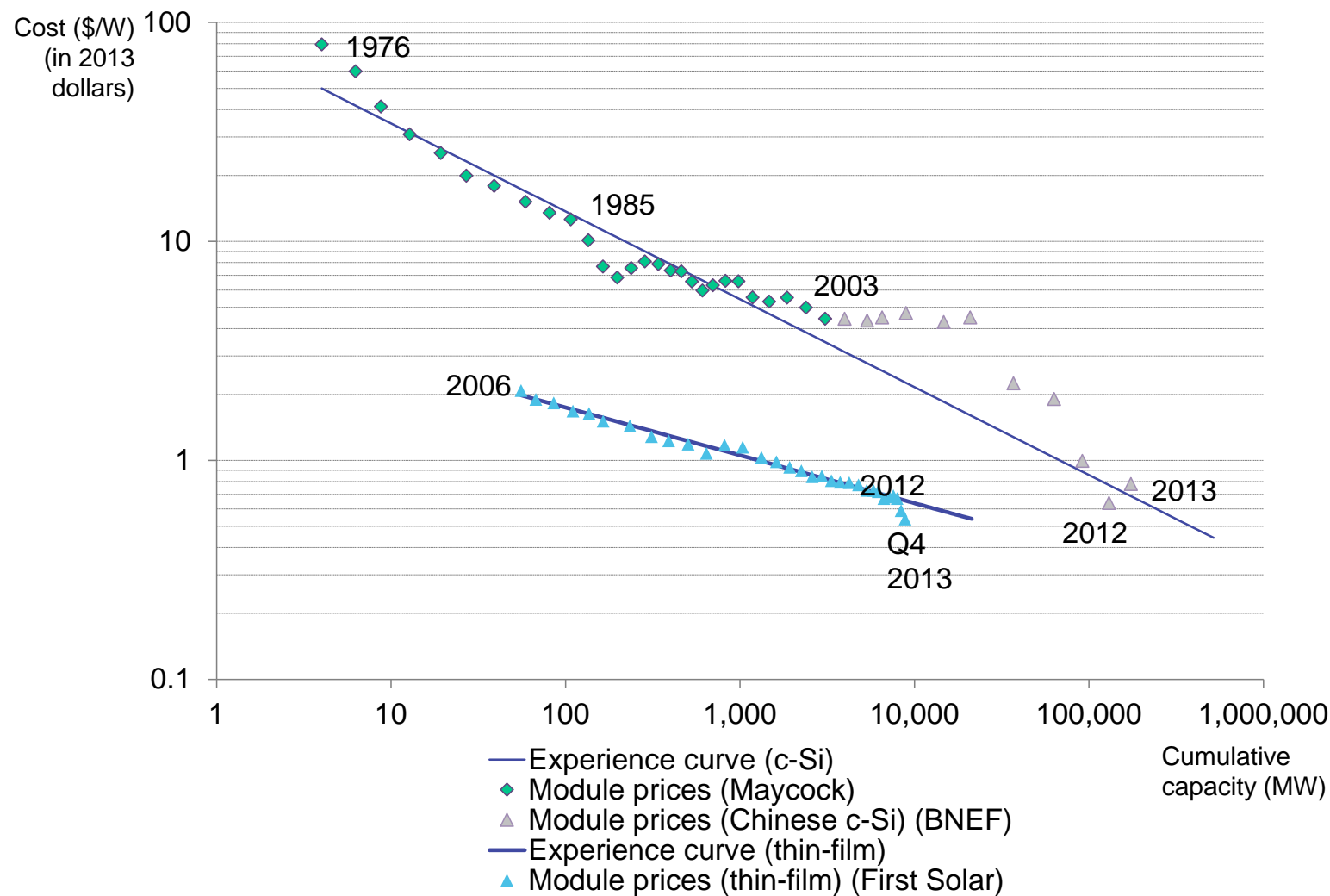
Capital investment by region and by technology, 2013-26 (\$bn nominal)



Note: Figure excludes other and flexible capacity.

Source: Bloomberg New Energy Finance

Price of solar modules and experience curve (\$/W as function of global cumulative capacity)

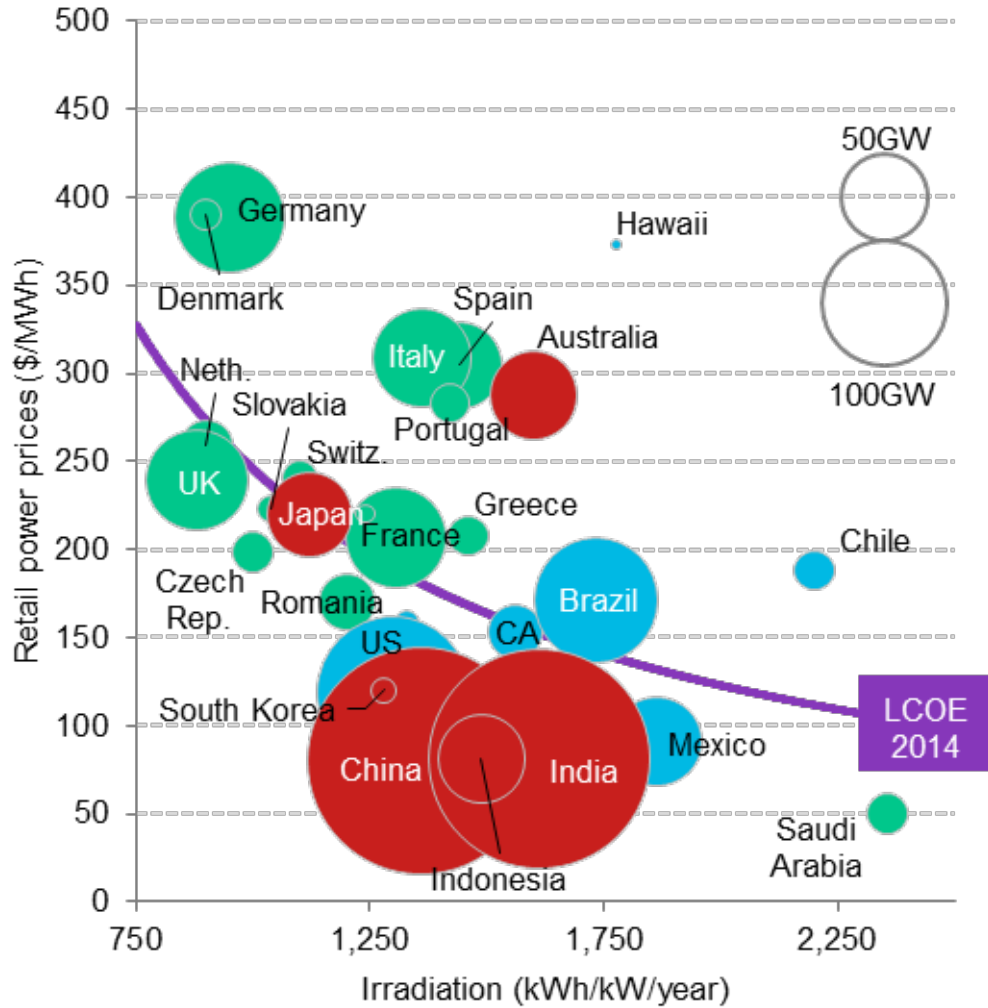


Source: Bloomberg New Energy Finance, Paul Maycock, company filings

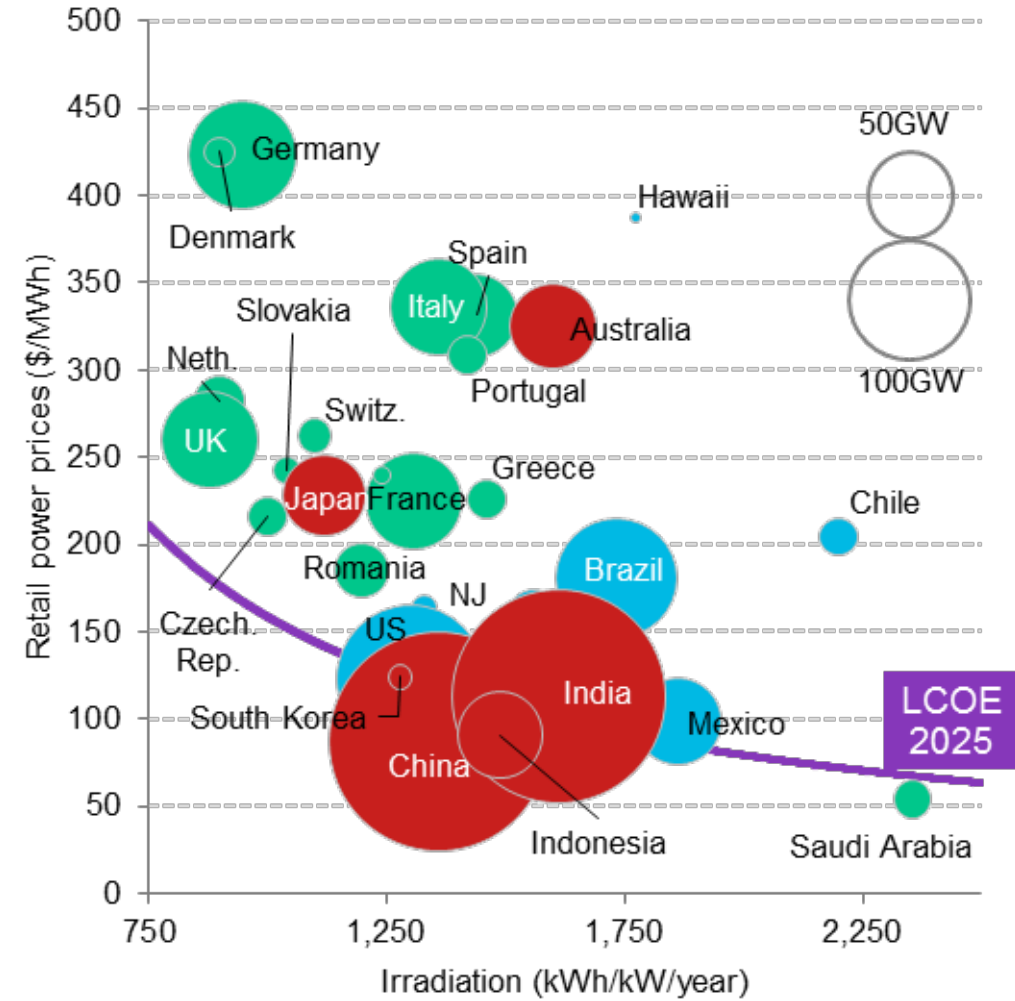
Notes: Prices in 2013 USD.

Global residential-scale PV system economics

2014



2025

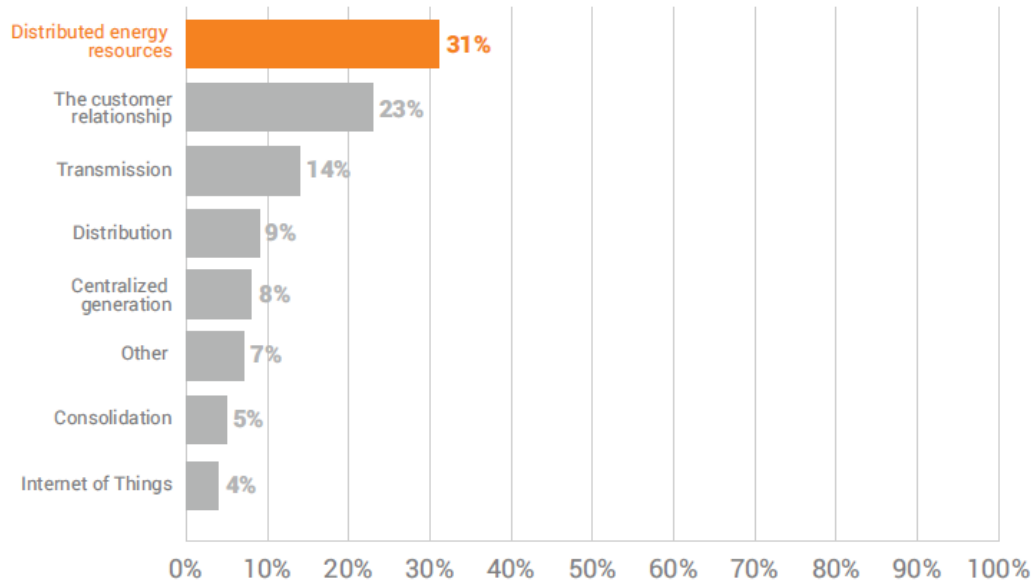


Note: NJ, New Jersey; CA, California. Source: Bloomberg New Energy Finance

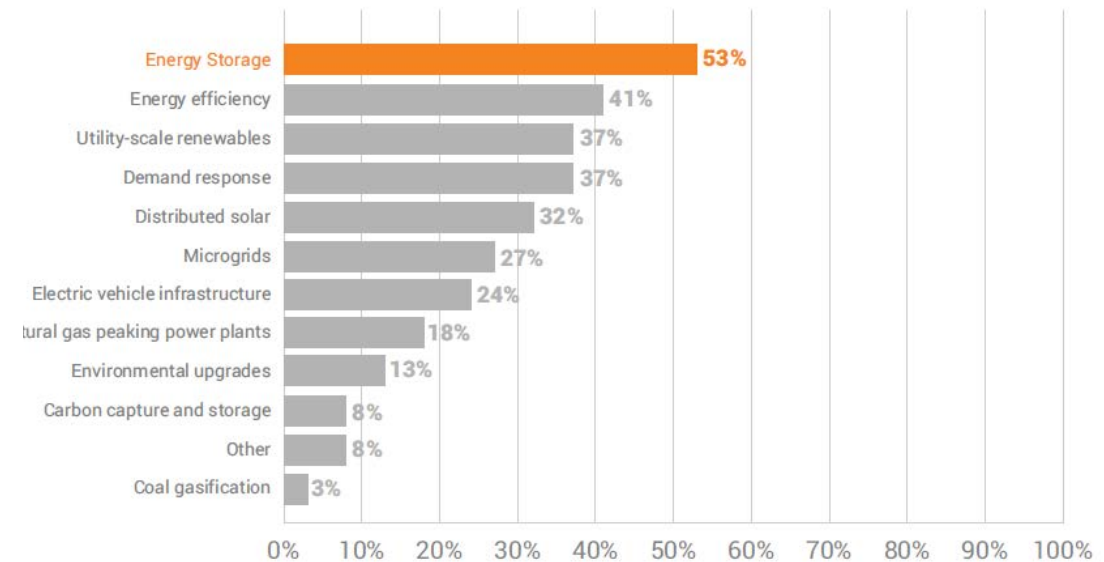
Note: NJ, New Jersey; CA, California. Source: Bloomberg New Energy Finance

Future of the utility: Results of survey of 400 US electric utility executives

What does your utility see as its biggest growth opportunity over the next five years?

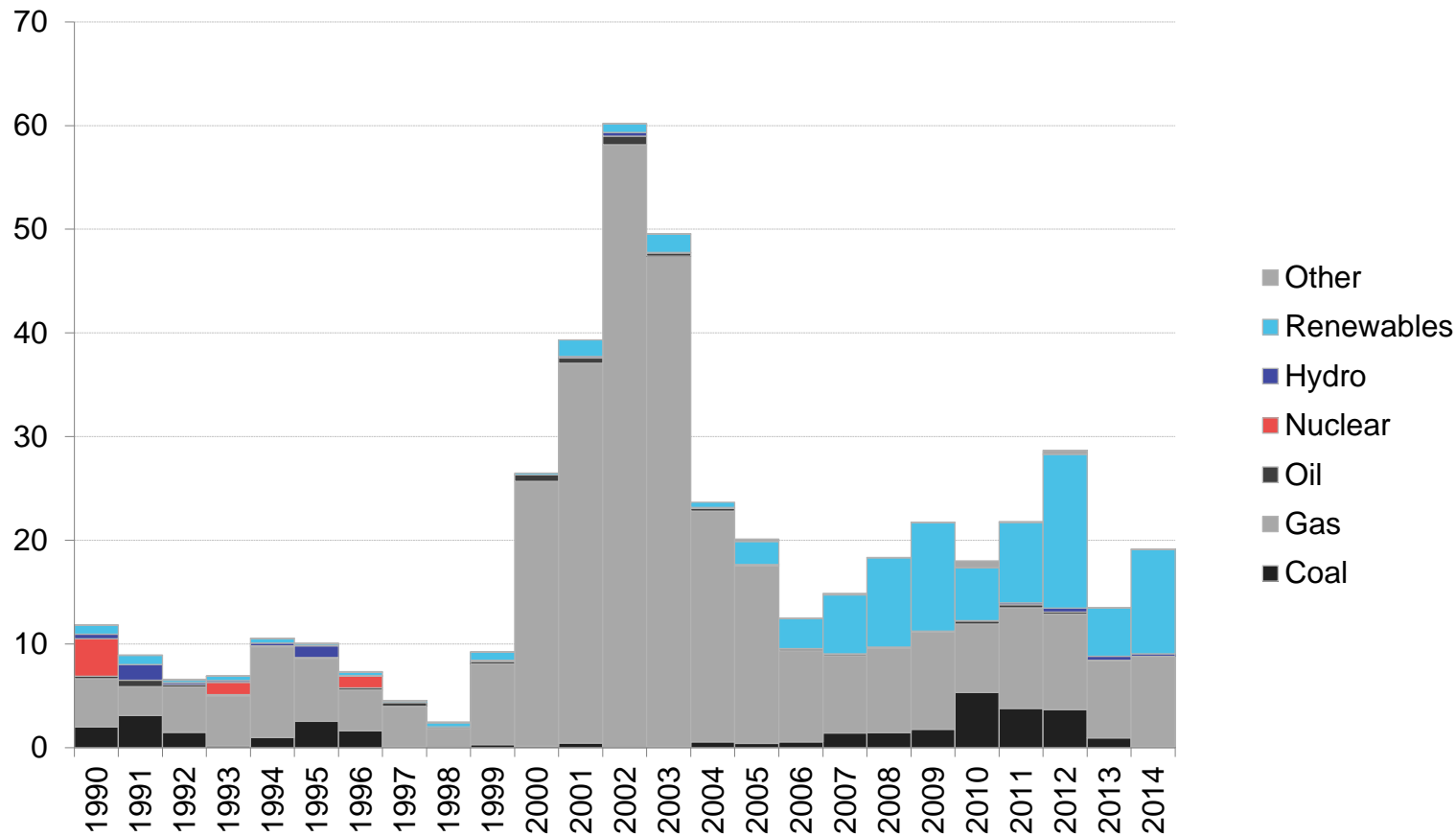


Q. What are the top three emerging technologies that you think your utility should invest more in?



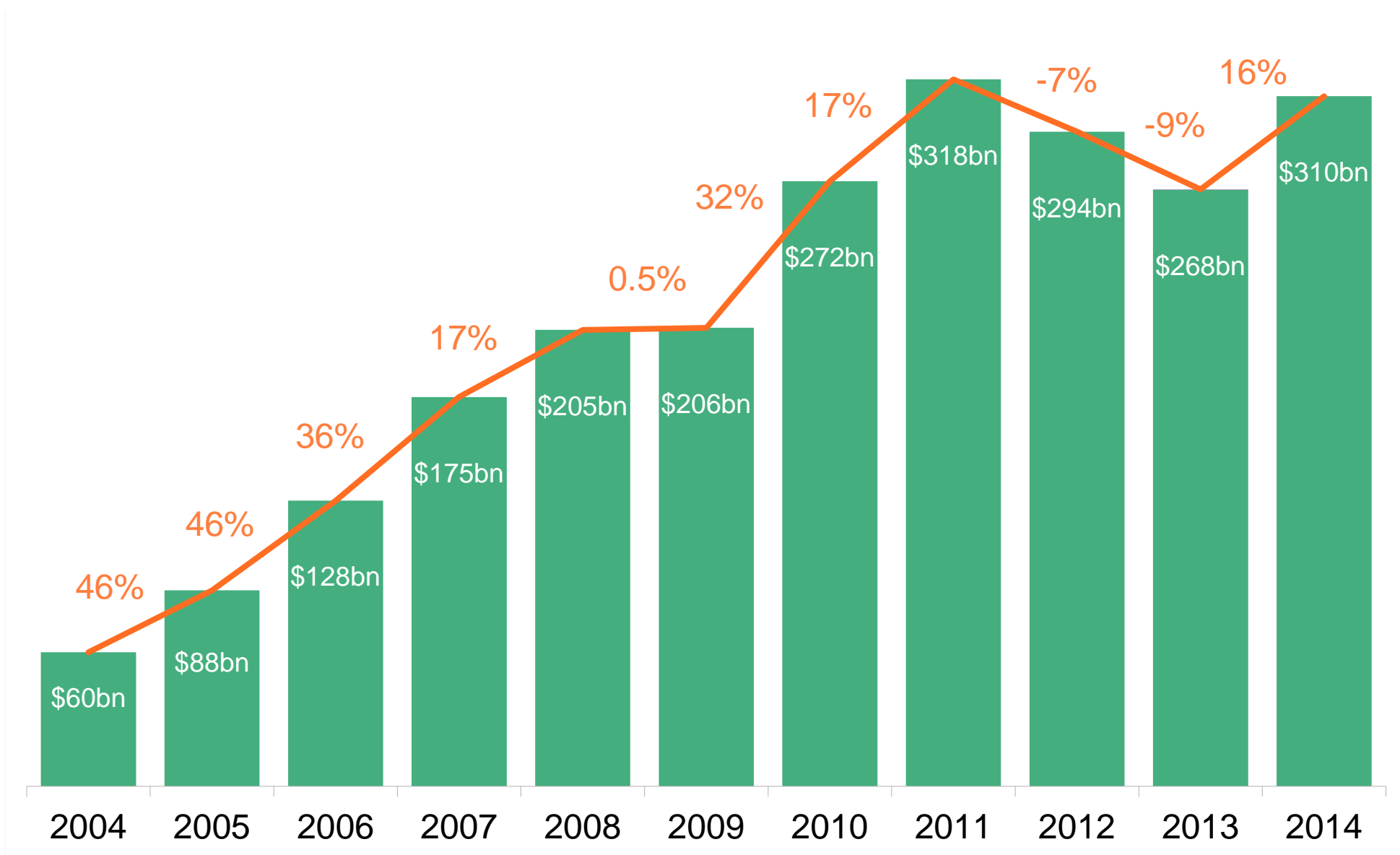
- “You can think about Hawaii as a postcard from the future of what’s going to happen in the electric industry in the United States”
 - James Robo, chairman and chief executive officer of NextEra, following the company’s acquisition of Hawaiian Electric Industries

US electric generating capacity build by fuel type (GW)



- Since 2000, 93% of new power capacity built in the US has been natural gas plants or renewable energy projects

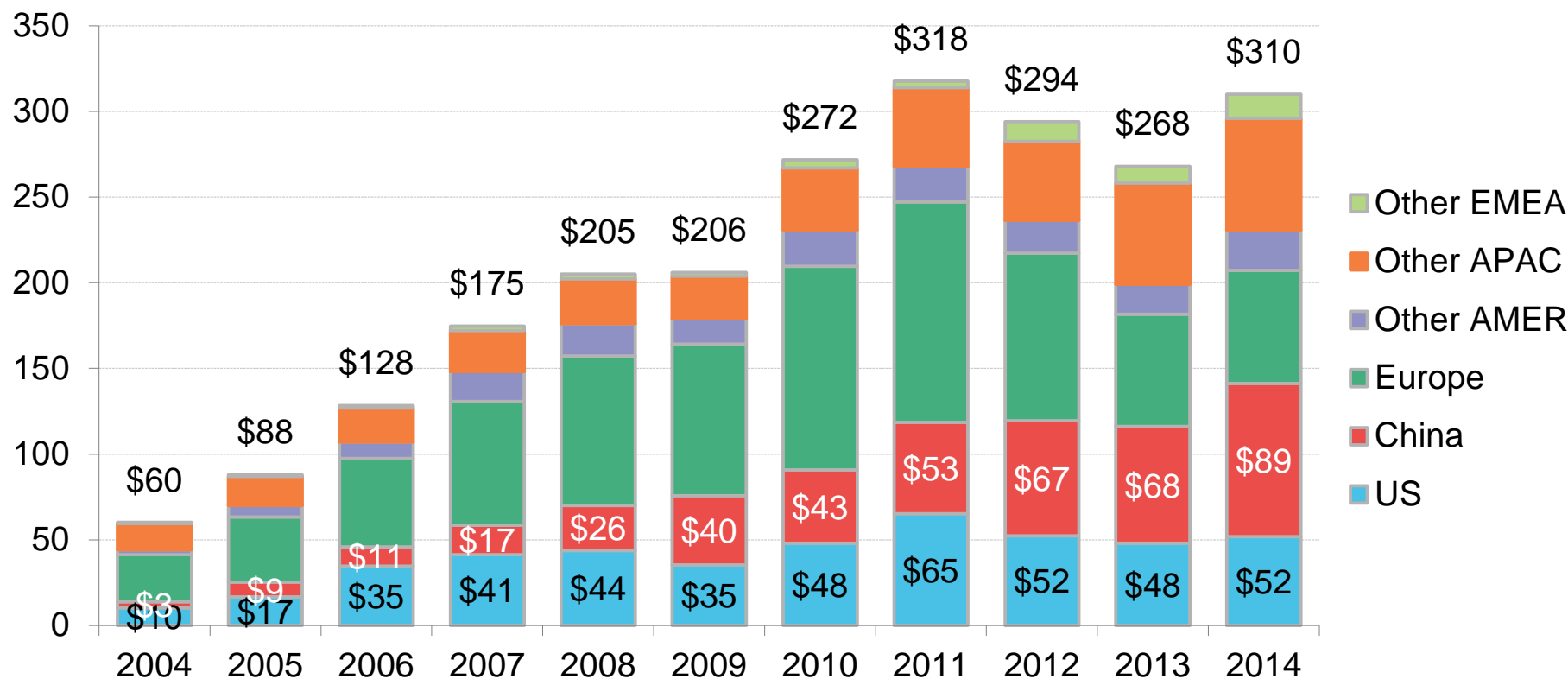
New investment in clean energy 2004-14 (\$bn)



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

New investment in clean energy by region (\$bn)

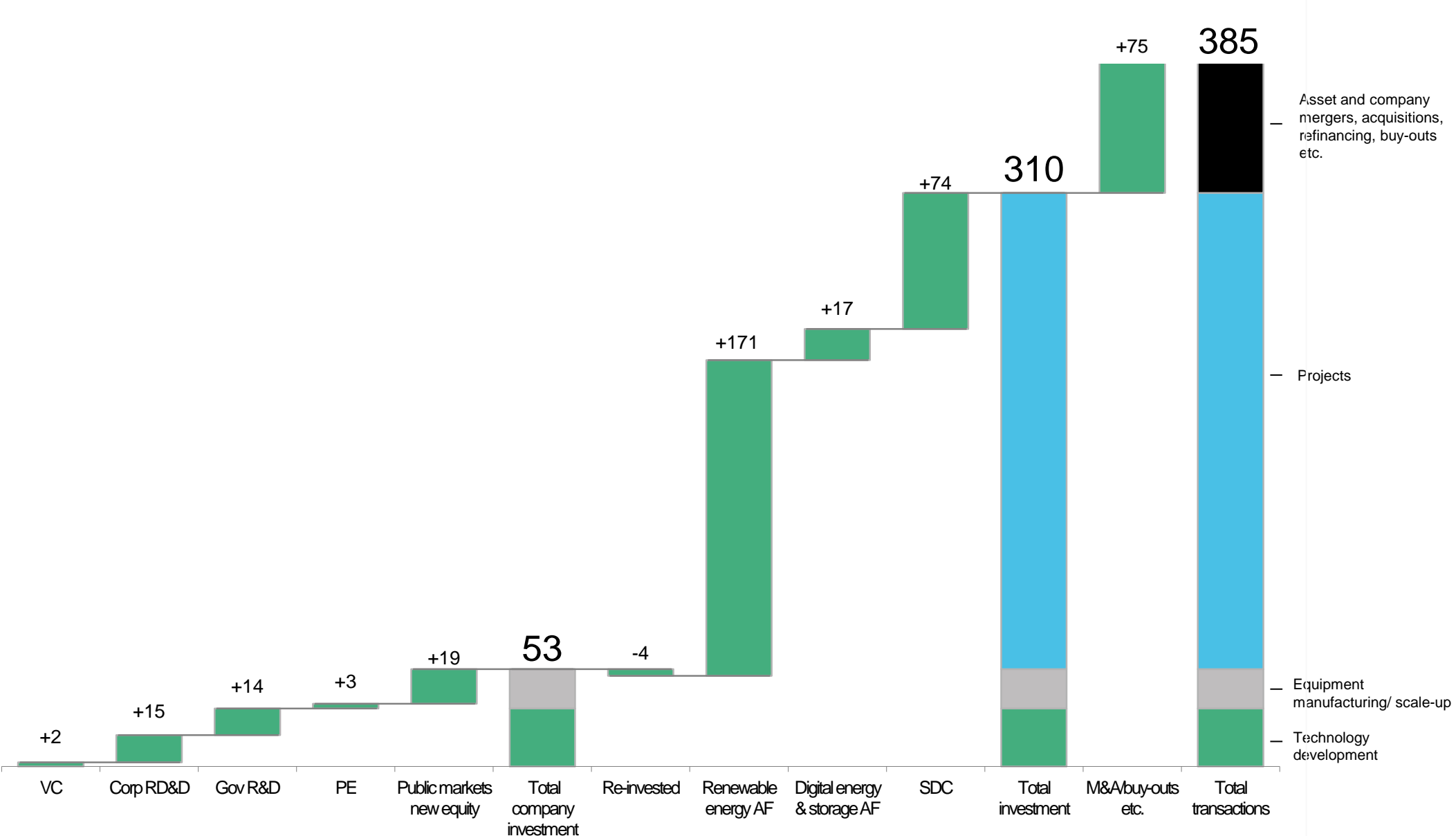


- Total new investment in clean energy globally increased for the first time in three years and is near its 2011 peak
- US investment levels were up in 2014 and are second highest in the world on a country basis
- In 2014, the US was the world's second-largest market for new wind installations, behind China, and third-largest for solar, behind China and Japan

Source: Bloomberg New Energy Finance

Notes: For definition of clean energy, see slide in Section 2.2 of this report titled 'Finance: US clean energy investment (1 of 2) – total new investment, all asset classes (\$bn)'. AMER is Americas; APAC is Asia-Pacific; EMEA is Europe, Middle East, and Africa.

Clean energy investment types & flows 2014 (\$bn)

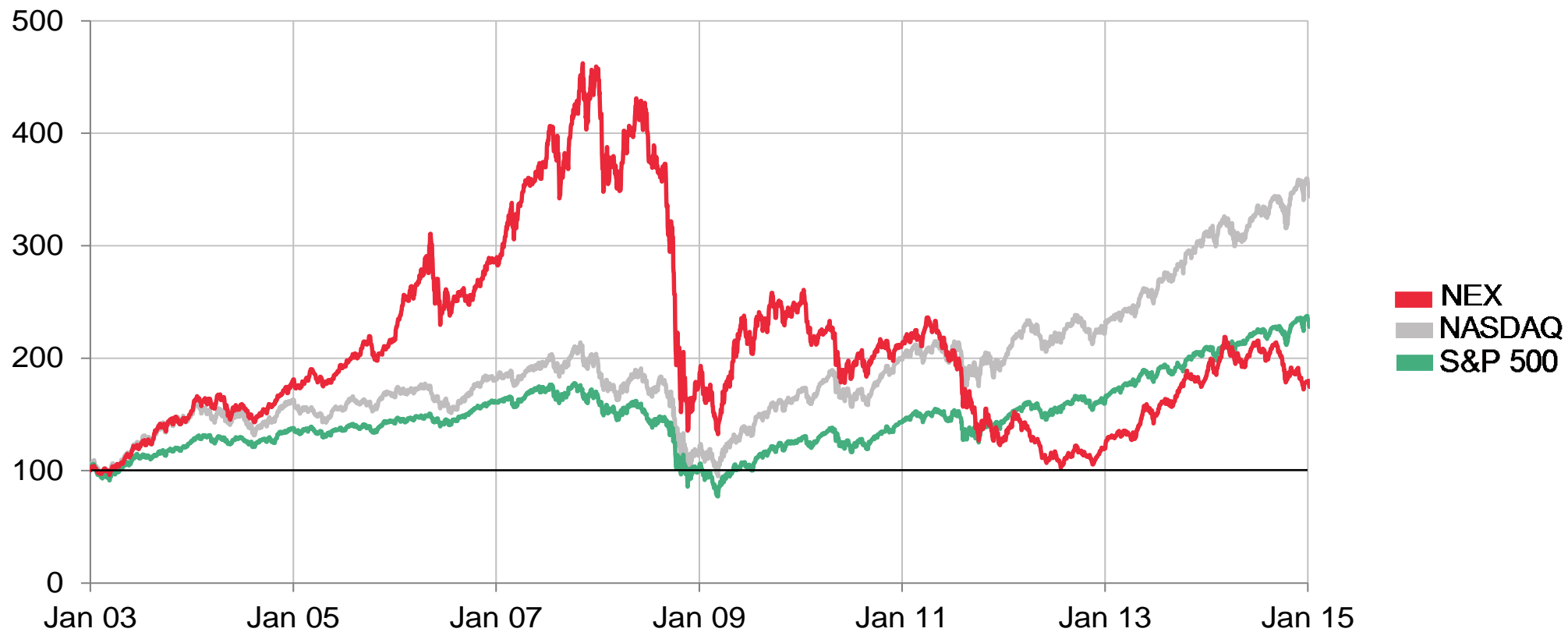


Note: Total values include estimates for undisclosed deals. AF = asset finance, SDC = small distributed capacity.

Source: Bloomberg New Energy Finance

NEX CLEAN ENERGY INDEX

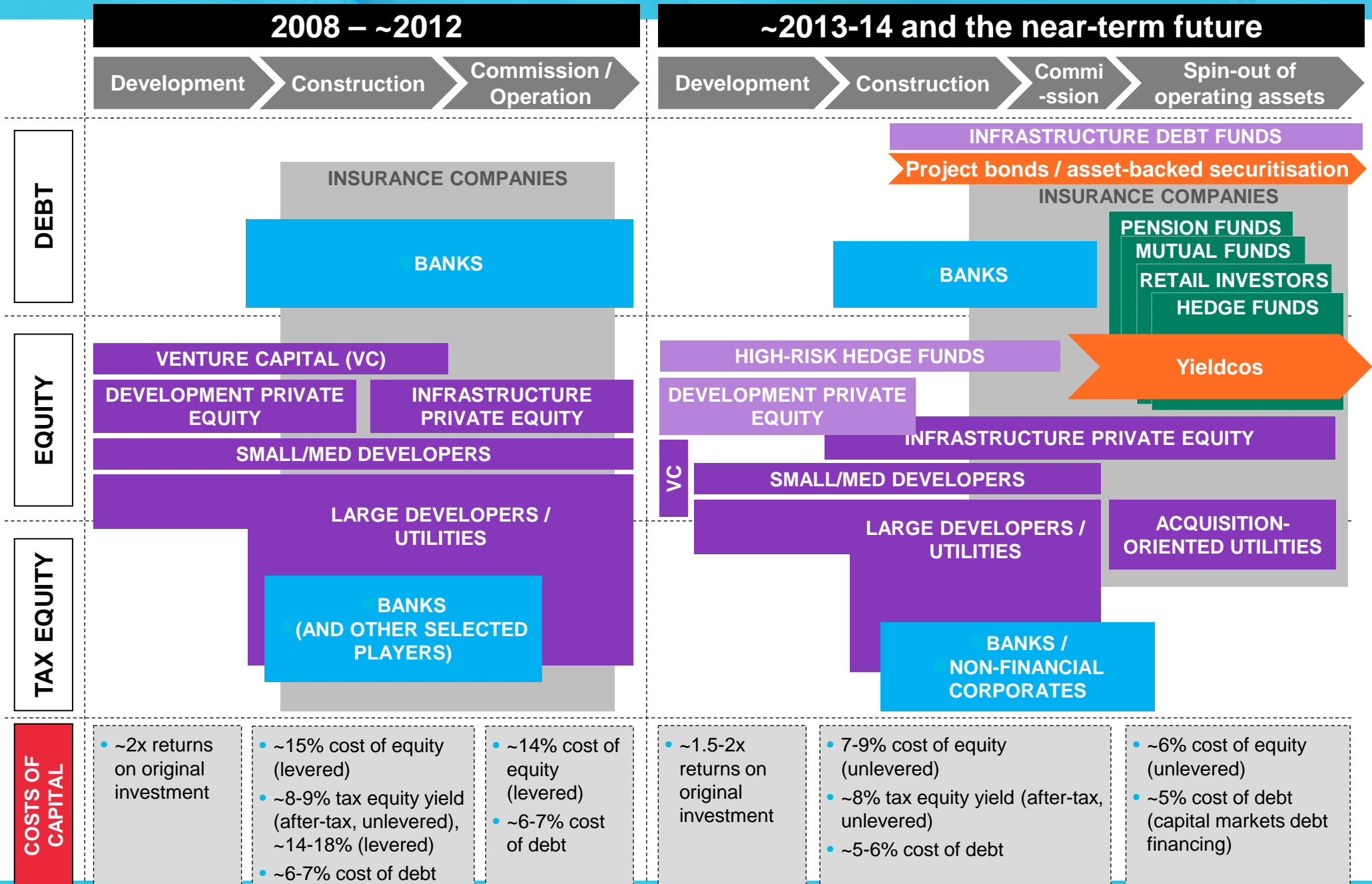
2003–15 YTD



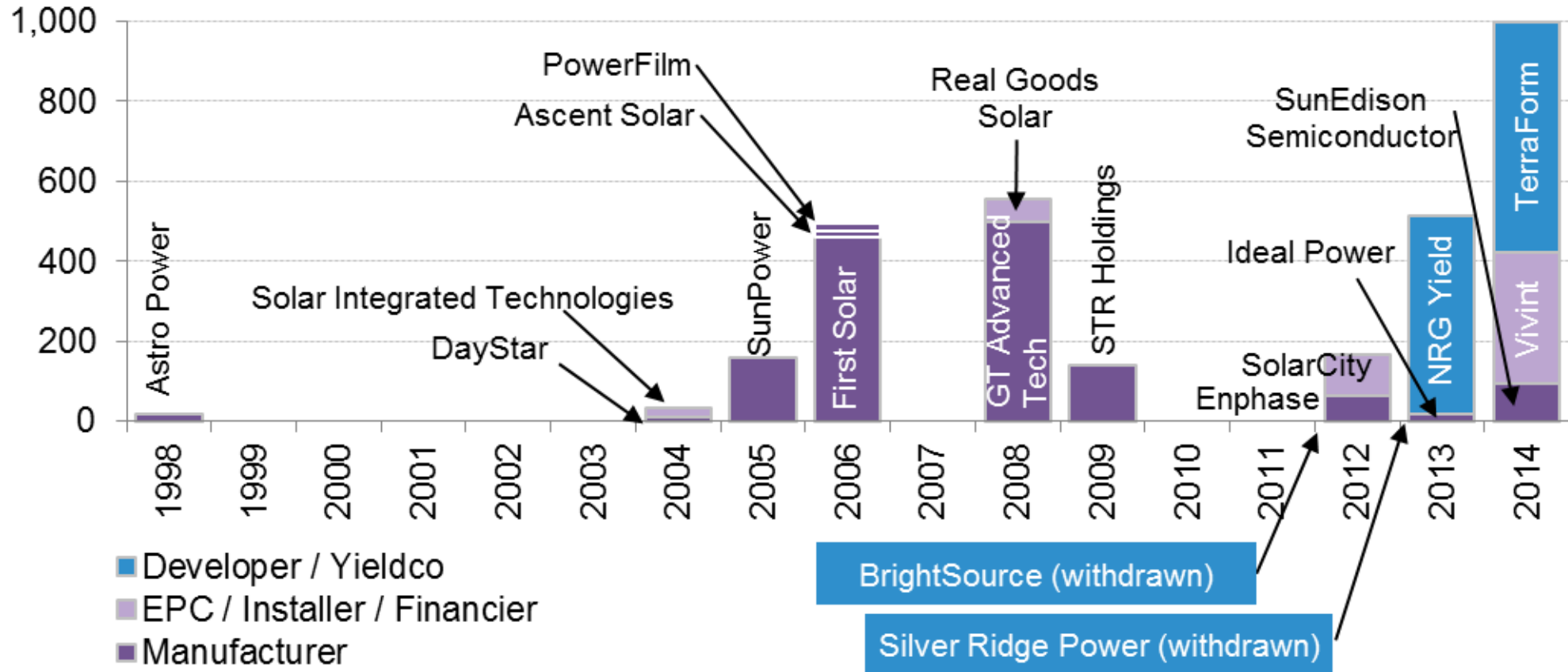
Note: Values as of 01 January 2015; NASDAQ and S&P 500 rebased to 100 on 1 Jan 2003

Source: Bloomberg New Energy Finance

EVOLUTION OF US SOLAR PROJECT FINANCING



US SOLAR IPOs BY YEAR AND TOTAL OFFERING SIZE (\$M)

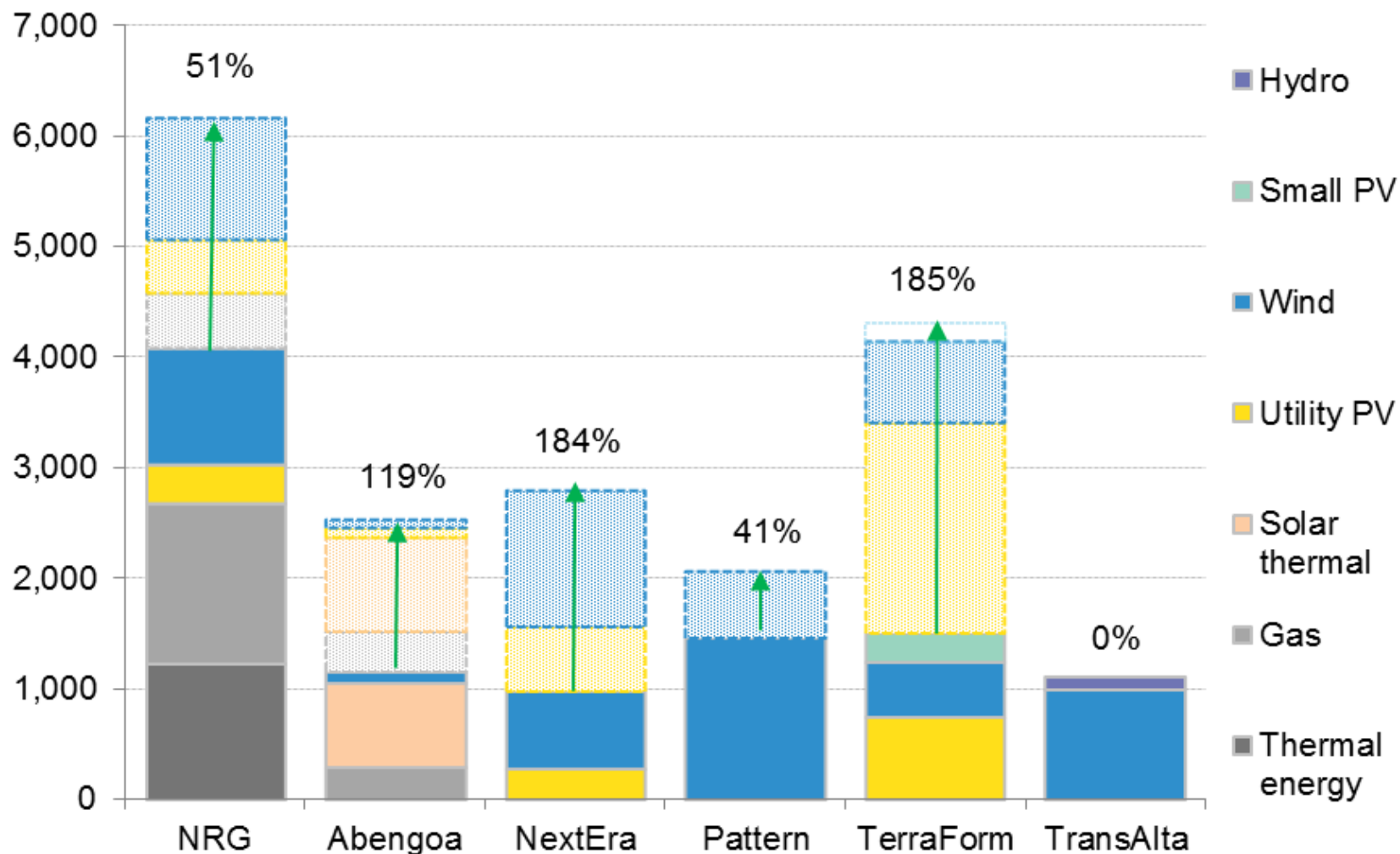


Source: Bloomberg New Energy Finance

Publicly-traded company whose main purpose is to buy and hold **operational assets** and pass the majority of cashflows from those assets to investors in the form of **dividends**

- Not new – eg, Canadian firms originally launched under FAIT structures (Innergex, Brookfield, Northland Power)
- This recent surge is unique as the companies are not tax-advantaged, and most are focused in US with strong tilt towards non-hydro renewable energy
- For investors, the opportunity looks especially attractive in environment of low interest rates

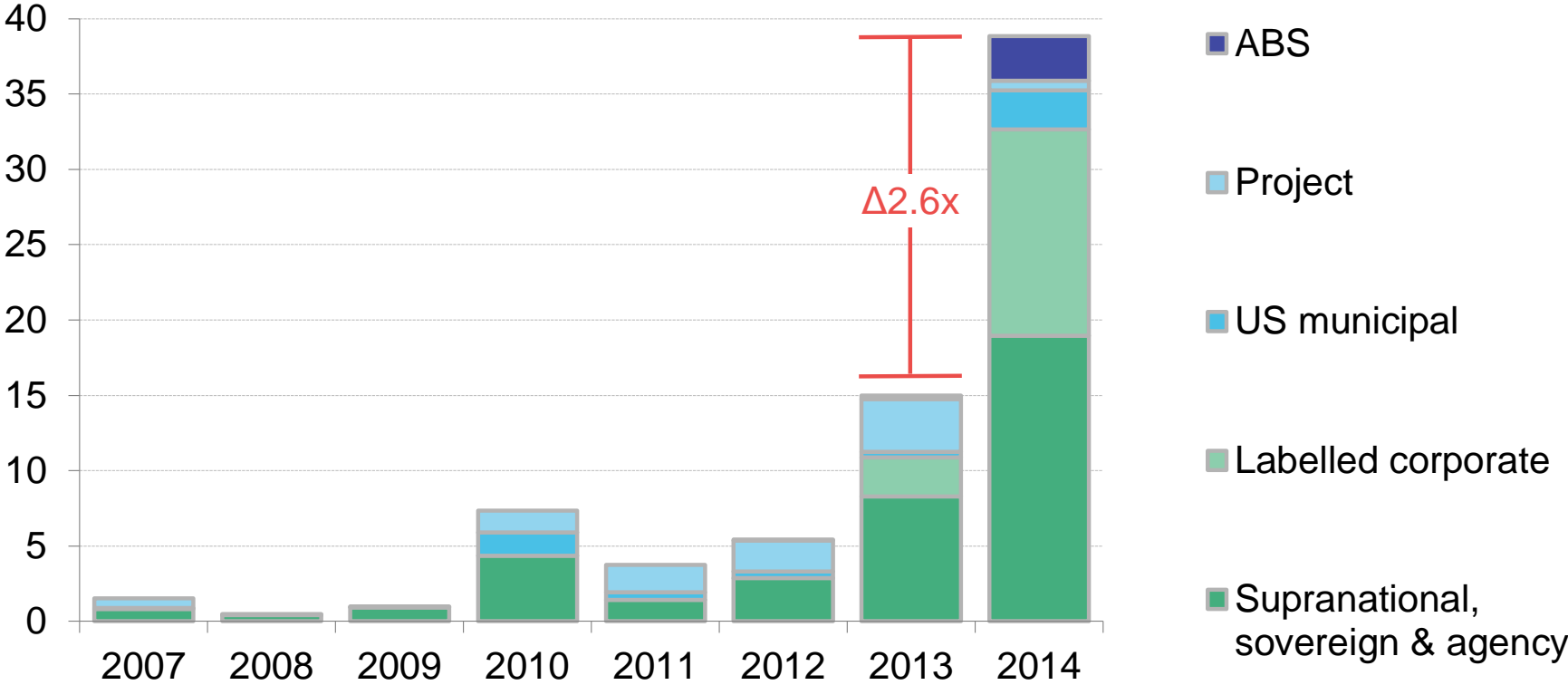
NORTH AMERICAN YELDCOS: NAMEPLATE CAPACITY BY TECHNOLOGY, CURRENT VS PLANNED (MW, GROWTH)



Note: Patterned bars indicate planned capacity, and coloured bars indicate current capacity in the yieldco. Abengoa's non-power generation assets are not reflected in this chart. TerraForm numbers include recent First Wind acquisition. Planned includes ROFO plus pending acquisitions.

Source: Company filings, Bloomberg New Energy Finance

GREEN BOND (NARROW UNIVERSE) ISSUANCE BY TYPE, BY YEAR, 2007-14 (\$BN)

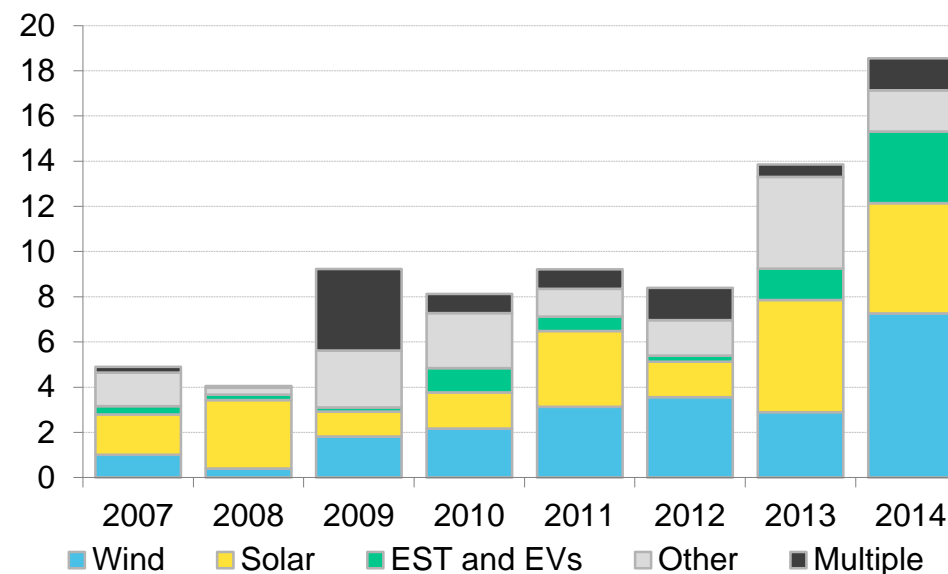
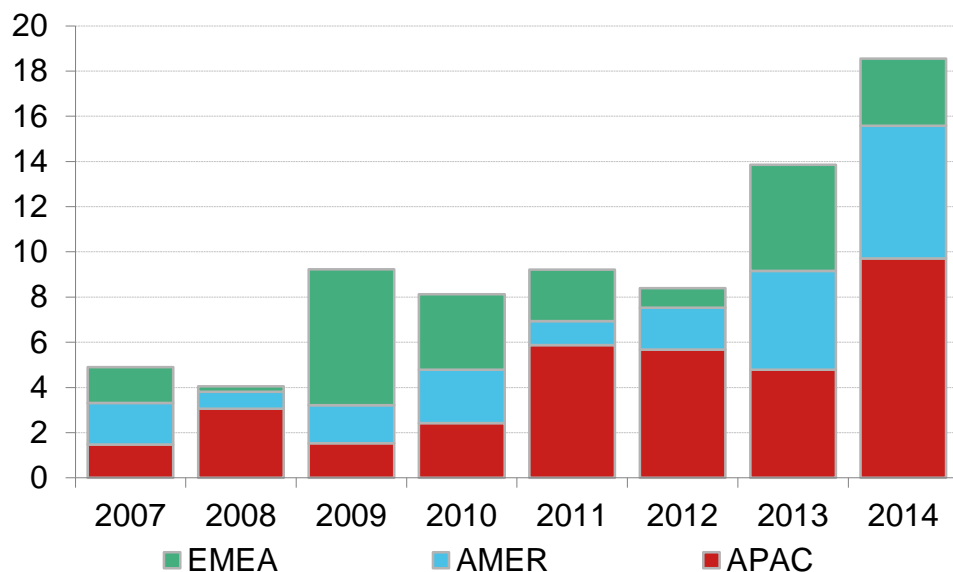


- ABS
- Project
- US municipal
- Labelled corporate
- Supranational, sovereign & agency

Source: Bloomberg New Energy Finance, Bloomberg Terminal

Notes: See Section 2 of BNEF's Q1 2015 Green Bonds Market Outlook for methodology.

A1 CORPORATE BOND ISSUANCE BY REGION (LEFT) AND BY ESTIMATED PRIMARY SECTOR (RIGHT), BY YEAR, 2007-14 (\$BN)



Notes: 'APAC' is Asia-Pacific; 'AMER' is Americas region; 'EMEA' is Europe, Middle East, Africa. 'EST' stands for energy smart technologies, BNEF's terminology for digital energy, energy efficiency and advanced energy storage. 'EVs' stands for electric vehicles. 'Other' includes bioenergy, geothermal and small hydro. See Section 2 of the accompanying report for methodology.

Source: Bloomberg New Energy Finance, Bloomberg Terminal

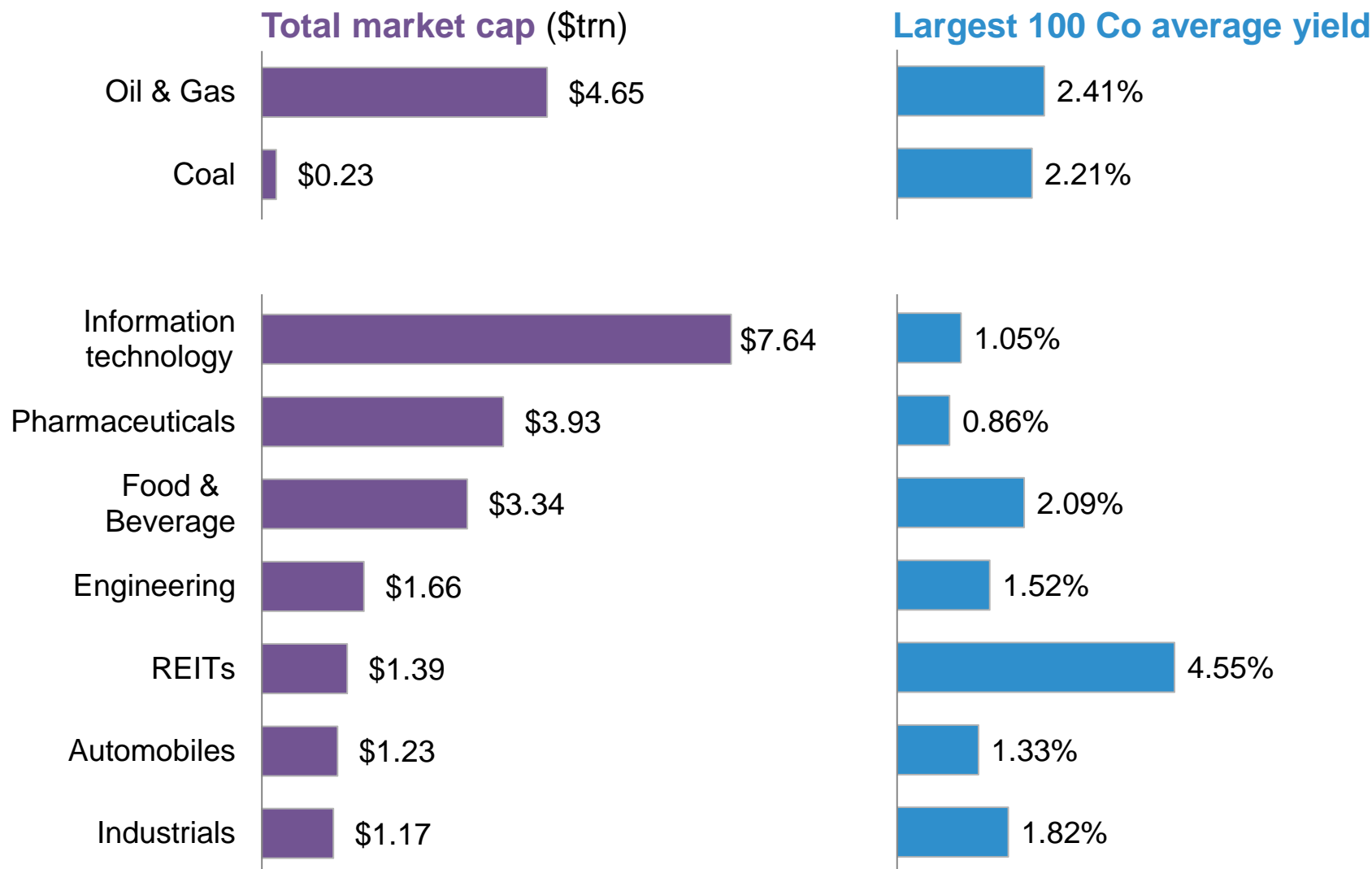
Table 2: Acceptable use of proceeds types in Bloomberg’s ‘market labelled’ universe

Use of proceeds type	Example
Renewable energy	Solar, wind, small hydropower, geothermal, biomass/biofuel/bioenergy, waste-to-energy, tidal and other renewables
Energy smart technologies and energy efficiency	Electric and hybrid vehicles, fuel cells, energy storage, digital energy and energy efficiency (buildings, industry, LED and smart lighting) and other green building initiatives
Green buildings and infrastructure	New LEED, BREEAM or other certified building and energy efficient social infrastructure
Agriculture and forestry	Forestry management, reforestation, afforestation and land-use
Other sustainability	Other climate change adaptation/mitigation, including waste management, clean water, pollution control, etc.

Source: Bloomberg, Bloomberg New Energy Finance

SIGNIFICANT FOSSIL FUEL DIVESTMENT WILL MEAN INVESTING OUTSIDE OF ENERGY STOCKS

Oil & gas and coal companies compared to other sectors (market cap and yield)



Source: Bloomberg

Note "average yield" is current average annual dividend yield. Includes the largest 3,000 companies in each sector, or fewer if the sector has less than 3,000 listed firms. Data as at 31 July 2014.

Based on BNEF report, "Fossil fuel divestment: a \$5trn challenge", August 2014

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