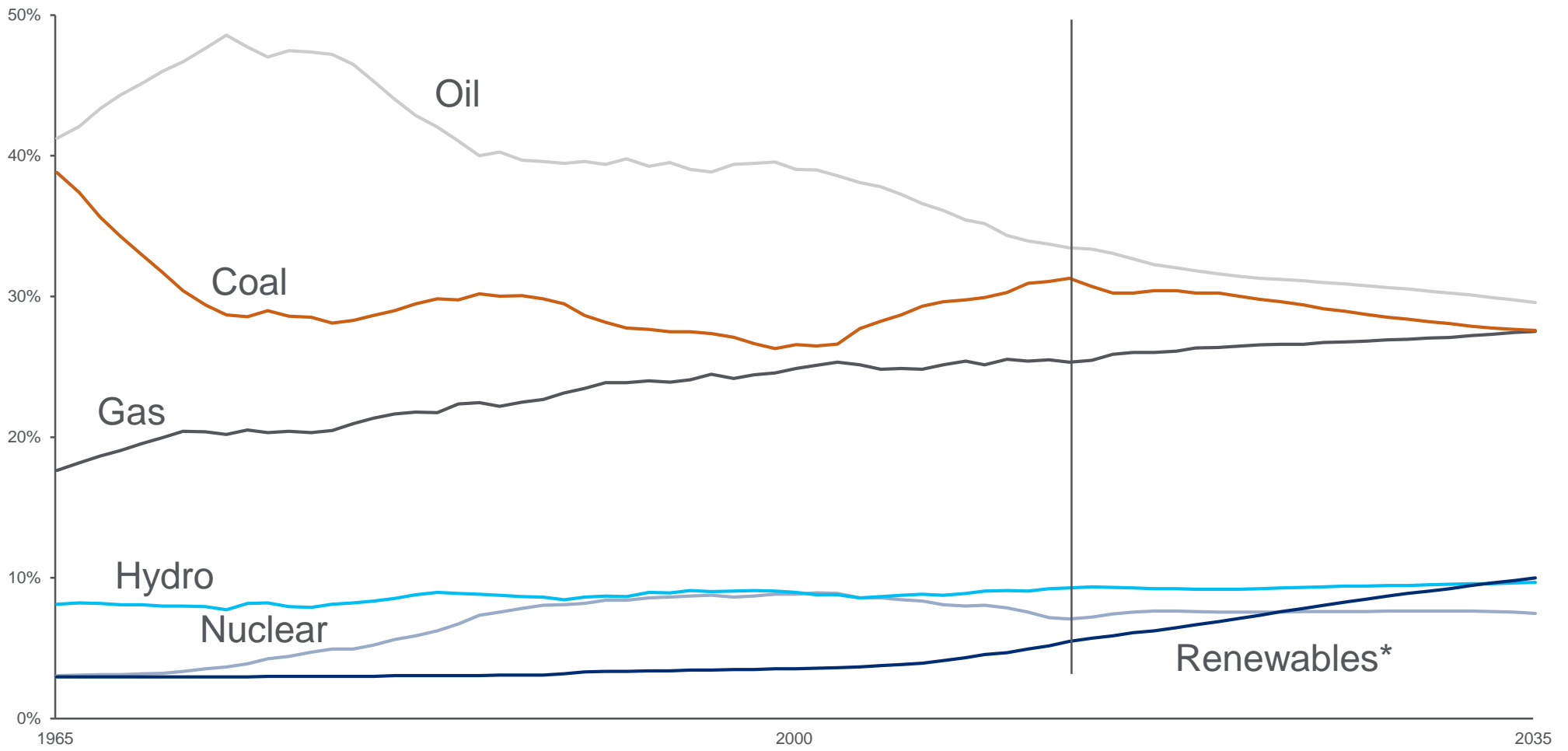


40 Years into a 100-Year Transition Innovation in Capital Market Financing of Clean Energy

Asia Clean Energy Forum
Asian Development Bank
Manila
June 16-19, 2015

Strictly Private and Confidential

Fossil fuels continue to provide most of the world's energy... However Renewables are growing



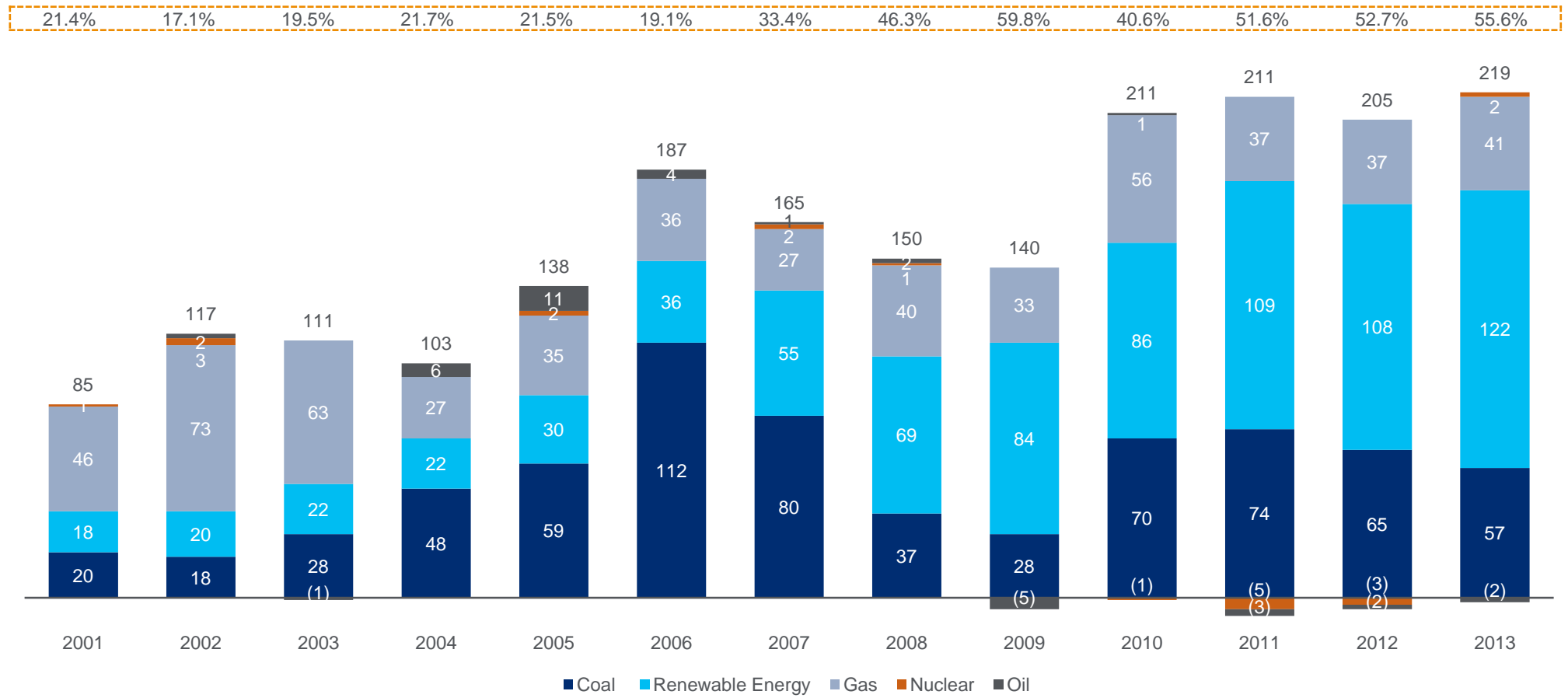
*Includes biofuels

Source: Energy Outlook 2035.

In generation, Renewable Energy has gained Market Share for the past ten years....

Global Yearly Net Additions
(GW)

Proportion Comprised of Renewables



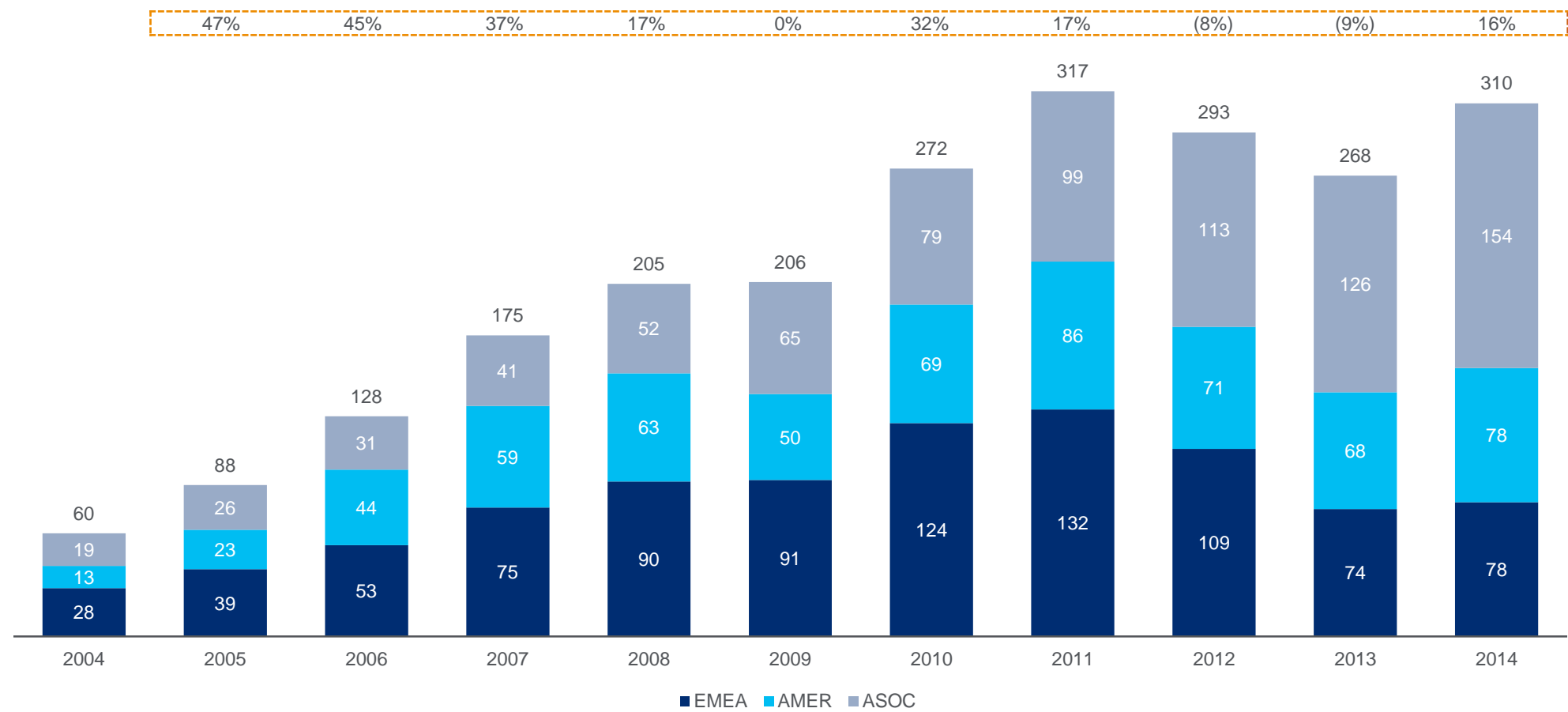
Source: Bloomberg New Energy Finance (BNEF).

New investment in clean energy is falling in Europe... Increasing in Asia

New Investment in Clean Energy by Region

(US\$ billion)

Change from Prior Year

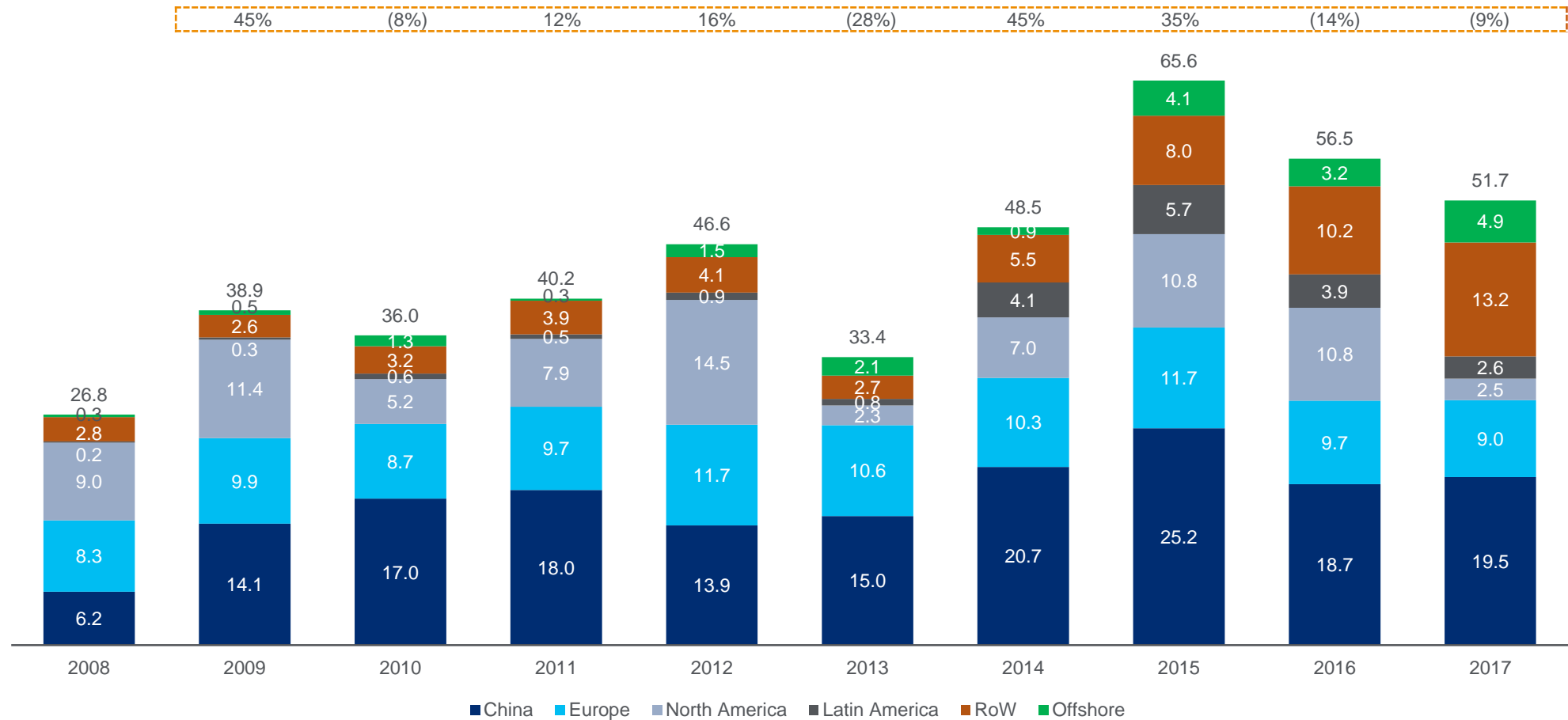


Source: Bloomberg New Energy Finance (BNEF).
Note: Total values include estimates for undisclosed deals. Includes corporate and government R&D, and spending for digital energy and energy storage projects.

Wind investment peaked in 2015 with China and Asia being significant contributors...

Global Wind Power Installations by Region (GW)

Change from Prior Year

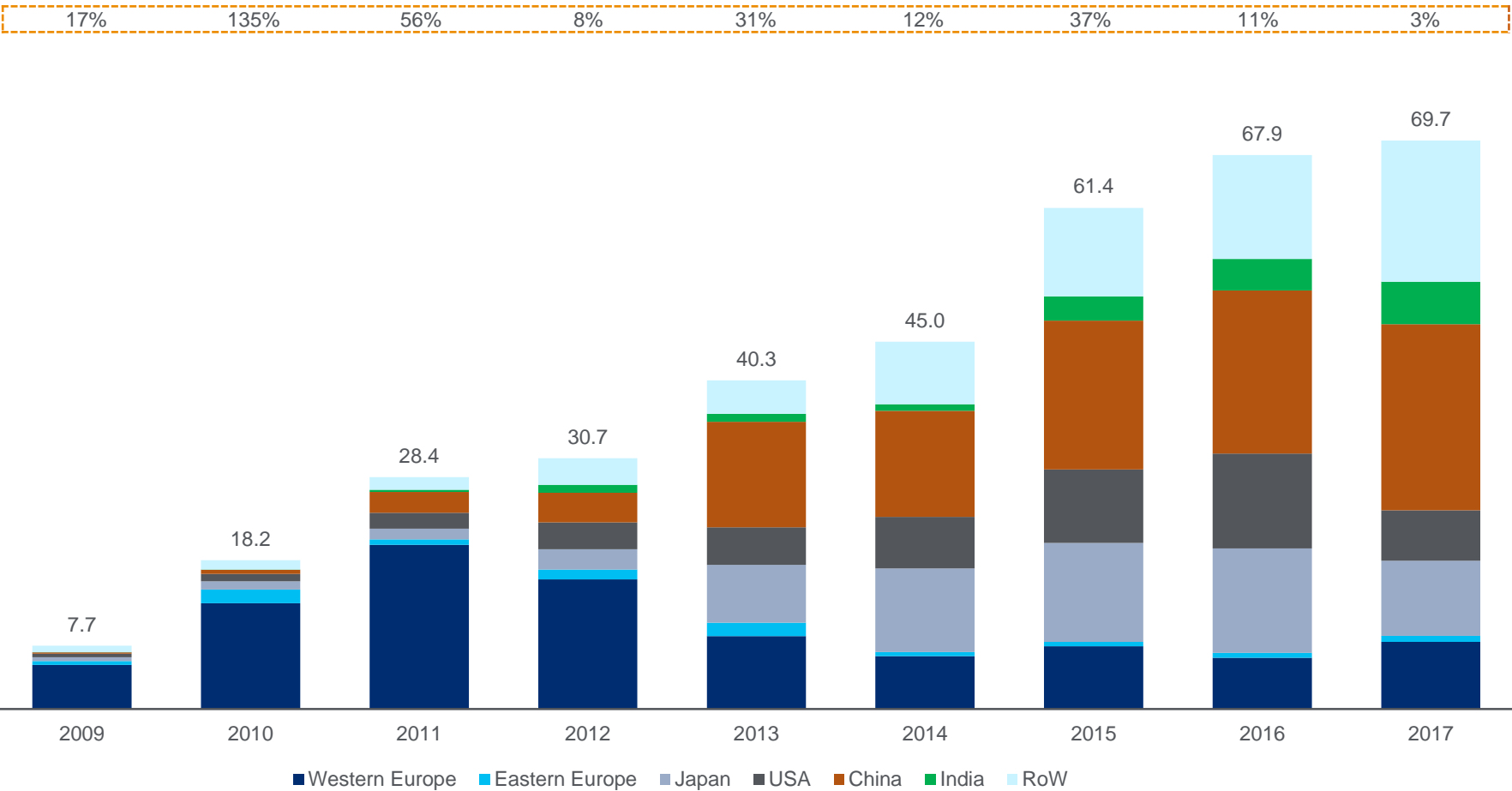


Source: Bloomberg New Energy Finance (BNEF) Q2 2015 Global Wind Market Outlook.

China, Japan, India and “Rest of World” have led growth in solar...

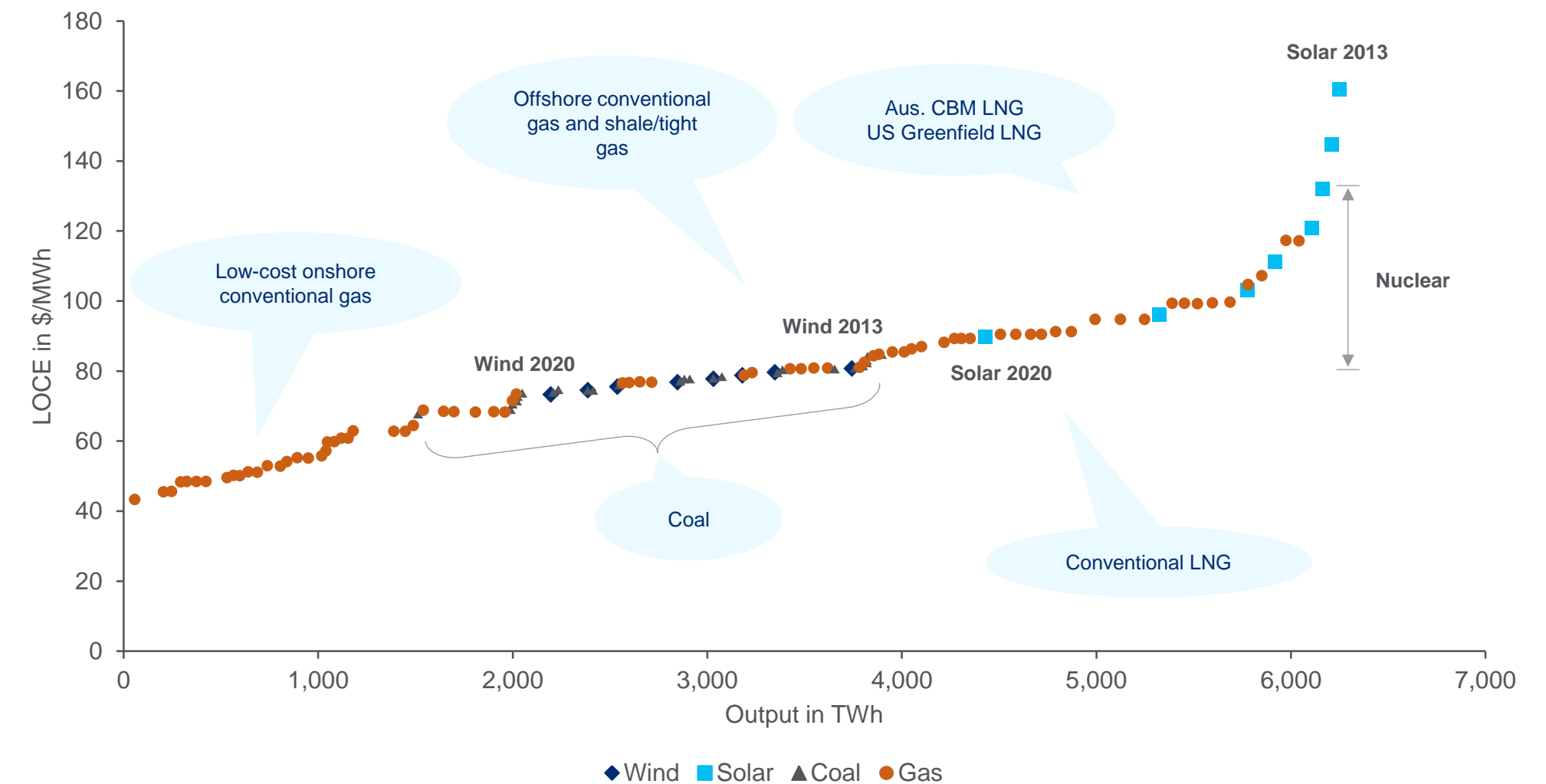
Global Solar PV Installations by Region
(GW)

Change from Prior Year



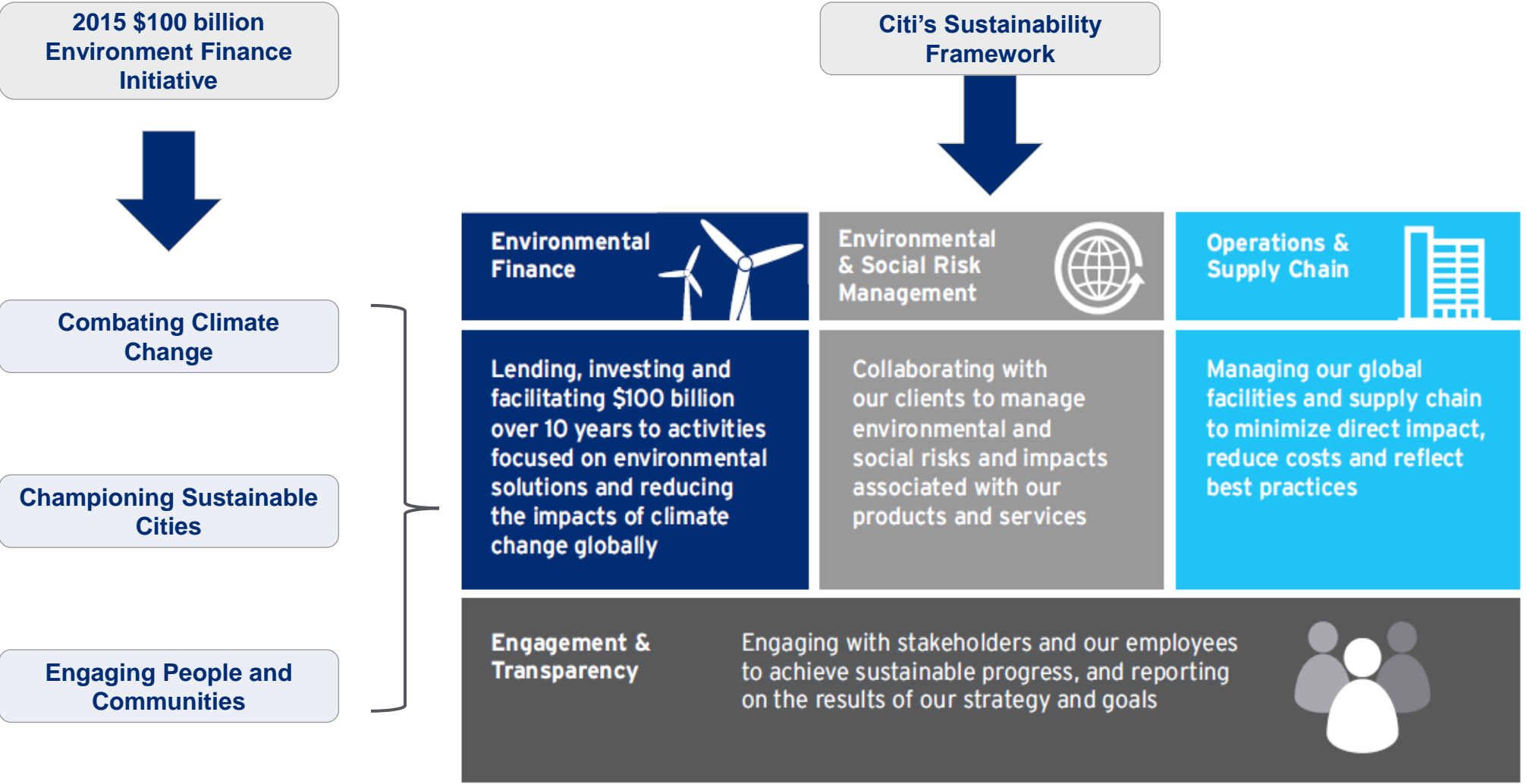
Source: Bloomberg New Energy Finance (BNEF) Q2 2015 Global PV Market Outlook (optimistic forecast case).

Renewables are becoming cost efficient based on the cost curve...



Source: Citi Research.

Citi's 2007 \$50 billion Climate Initiative commitment met by 2013... New \$100 billion initiative underway



After 30 years of efforts to “commercialize” renewable energy and energy efficiency, they all reached the Capital Markets in 2013 – a landmark year...

**Equity Capital
Markets**

NRG YIELD 

July 2013
First YieldCo by NRG Yield

**Debt Capital
Markets**



June 2013
First Draft of the Green
Bond Principles



November 2013
First Solar Securitization
by Solar City



November 2013
First EE Securitization
(WHEEL)

YieldCos: \$8.8 Billion by Citi in 21 months...

YieldCo IPOs




July 2013

U.S.
\$495 million IPO
Joint Bookrunner

NRG Yield

- Assets include natural gas, wind, power generation solar and power plants
- Overall demand 14.4x oversubscribed
- 42% existing NRG parent shareholders
- 91% of orders at-the-market




January 2015

U.S.
\$529 million IPO
Joint Bookrunner




June 2014

U.S.
\$829 million IPO
Joint Bookrunner




July 2014

U.S.
\$577 million IPO
Joint Bookrunner




February 2015



Spain
\$492 million IPO
Joint Bookrunner

YieldCo Follow-On




February 2015

Madrid / U.S.
\$300 million Exchangeable Notes
Joint Bookrunner



February 2015

U.S.
\$351 million Follow-On Offering
Joint Bookrunner






January 2015 / November 2014

U.S.
\$405mm Follow-On / \$350mm PIPE
Joint Bookrunner / Placement Agent

January 2015

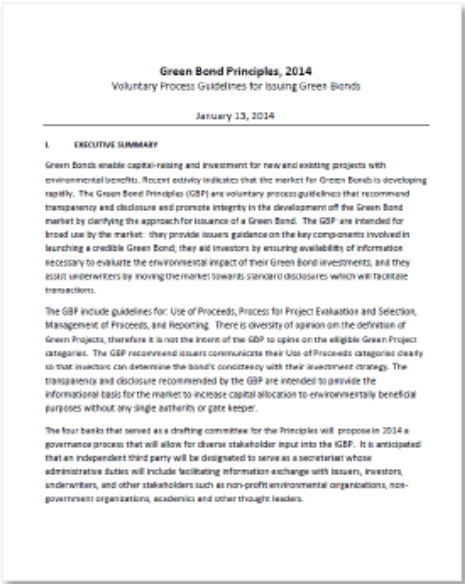
U.S.
\$328 million Follow-On Offering
Active Bookrunner

July 2014

U.S.
\$652 million Follow-On Offering
Active Bookrunner

Citi is a co-founder of the Green Bond Principles which recommend transparency and disclosure and promote integrity in the development of the Green Bond market...



1 Use of Proceeds

The issuer should **declare eligible Green Project categories** in the Use of Proceeds

2 Process for Project Evaluation and Selection

The issuer of a Green Bond should **outline the decision-making process** it follows **to determine the eligibility** of an individual investment using Green Bond proceeds

3 Management of Proceeds

The **net proceeds** of Green Bonds **should be moved to a sub-portfolio** or otherwise tracked by the issuer

4 Reporting

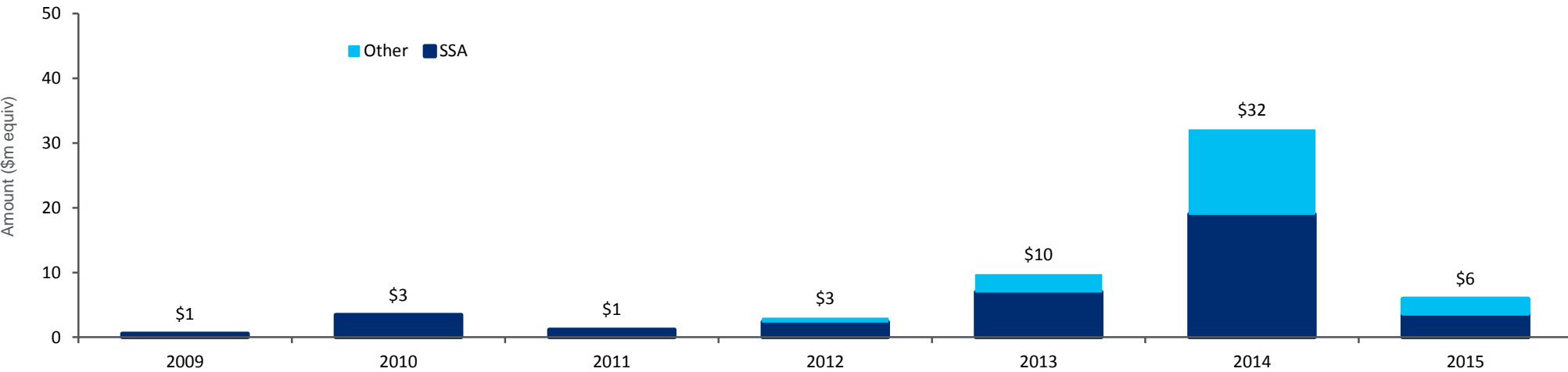
Issuers should **report at least annually on the specific investments made from the Green Bond proceeds**

Assurance

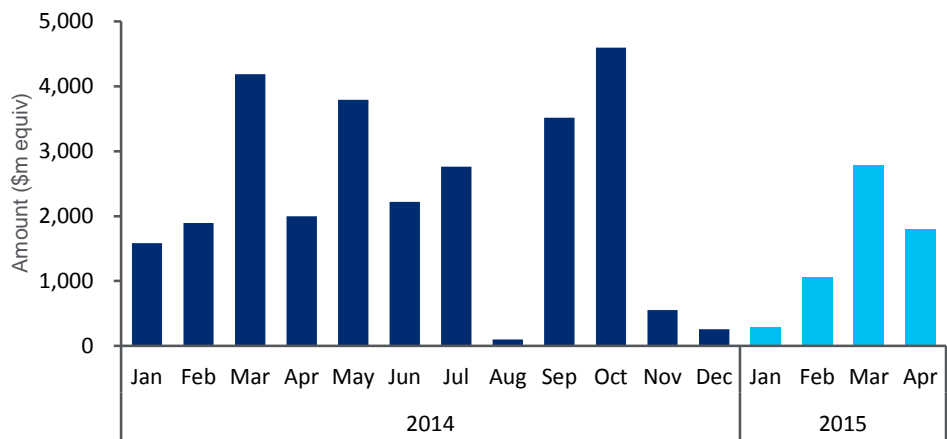
There are a variety of ways for issuers to obtain **outside input**, including **second party consultation** (hiring an expert consultant/firm with climate expertise), **publicly available reviews and audits** (expert consultant or auditor), **3rd party, independent verification/certification** (standards intended for use by accredited 3rd parties to certify Green Bonds)

2014 delivered a record year for Green Bond Offerings...

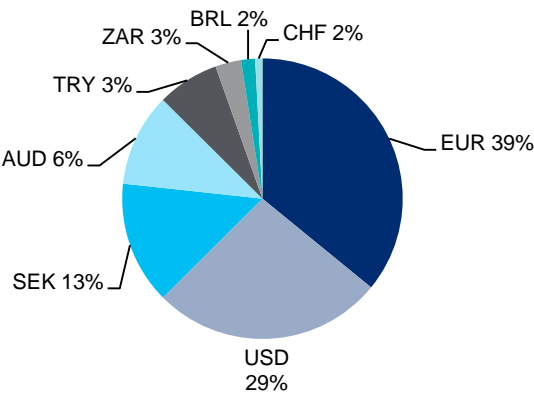
Green Bond Issuance Volumes



Issuance by Month: 2014 – 2015YTD



Issuance Volume by Currency Issuance in 2014 – 2015YTD



Source: Citi, Climate Bonds Initiative.

Who are the Green Bond Investors - Green Mandates...

BLACKROCK®



Asset
Management

 Everence




ZURICH®



Domini 
SOCIAL INVESTMENTS®

 TRILLIUM
ASSET MANAGEMENT®


mirova
Responsible Investing

CALSTRS

 Calvert
INVESTMENTS®

Outlook and Key Issues...

1

Continued Advancement into the Capital Markets, attracting Capital from Institutional Investors:

- Pension funds
- Insurance companies
- Equity and debt funds
- Other managed funds

2

Increasing integration of “Public-Private Partnerships”:

- Blended financings
- Public sector risk absorption
- Private sector innovations



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efficiency, renewable energy and mitigation