

25 May 2016

# IMPLICATIONS OF PROLONGED LOW ENERGY PRICES ON THE ENERGY MIX

ASIA PACIFIC ENERGY RESEARCH CENTRE

APERC Annual Conference 2016

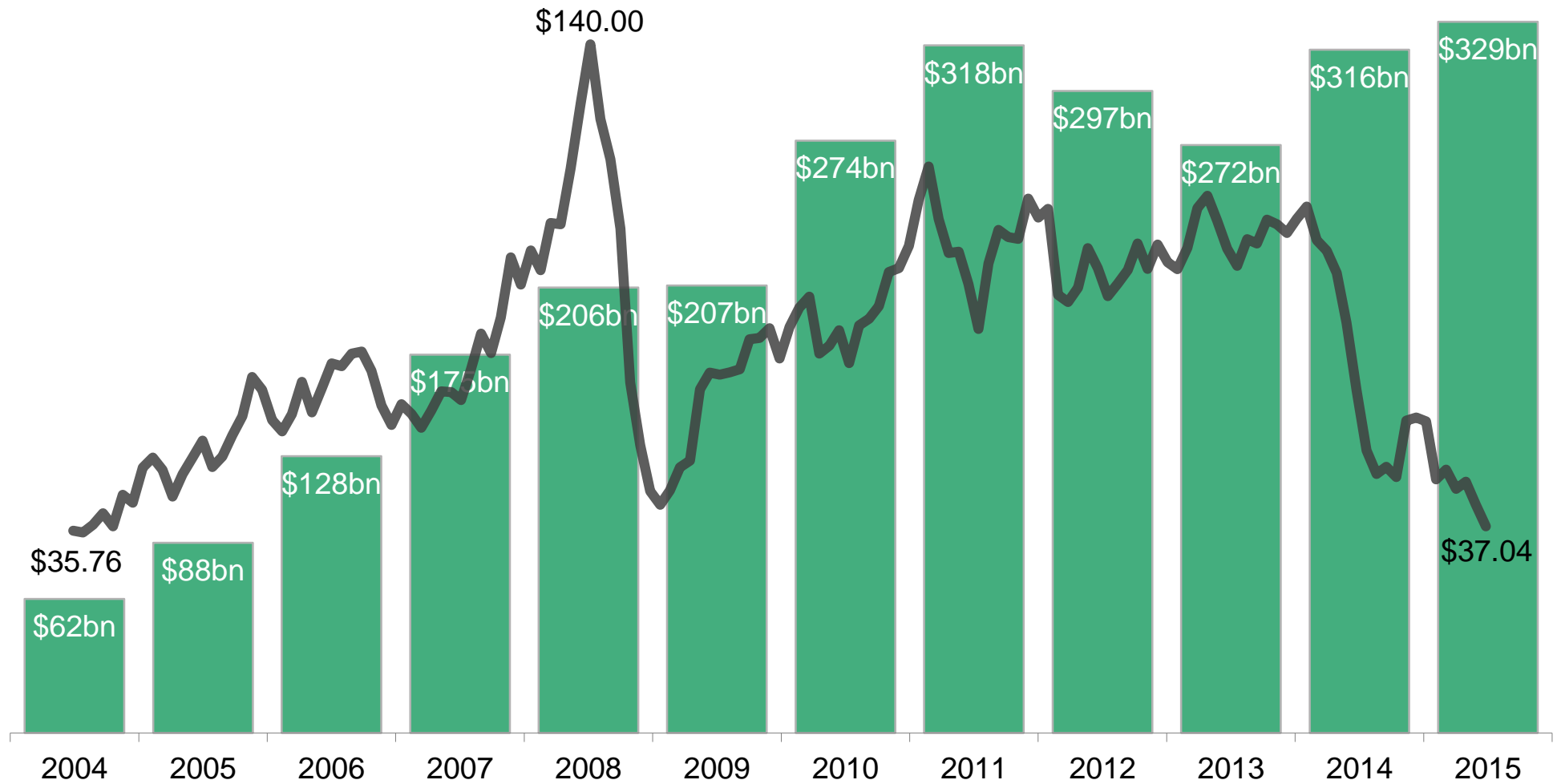
Hotel CHINZANSO, Tokyo

Ali Izadi

**Bloomberg**  
NEW ENERGY FINANCE

# CLEAN ENERGY INVESTMENT ROSE WHILE OIL PLUMMETED

GLOBAL CLEAN ENERGY INVESTMENT VS WTI CRUDE SPOT 2004 - 2015

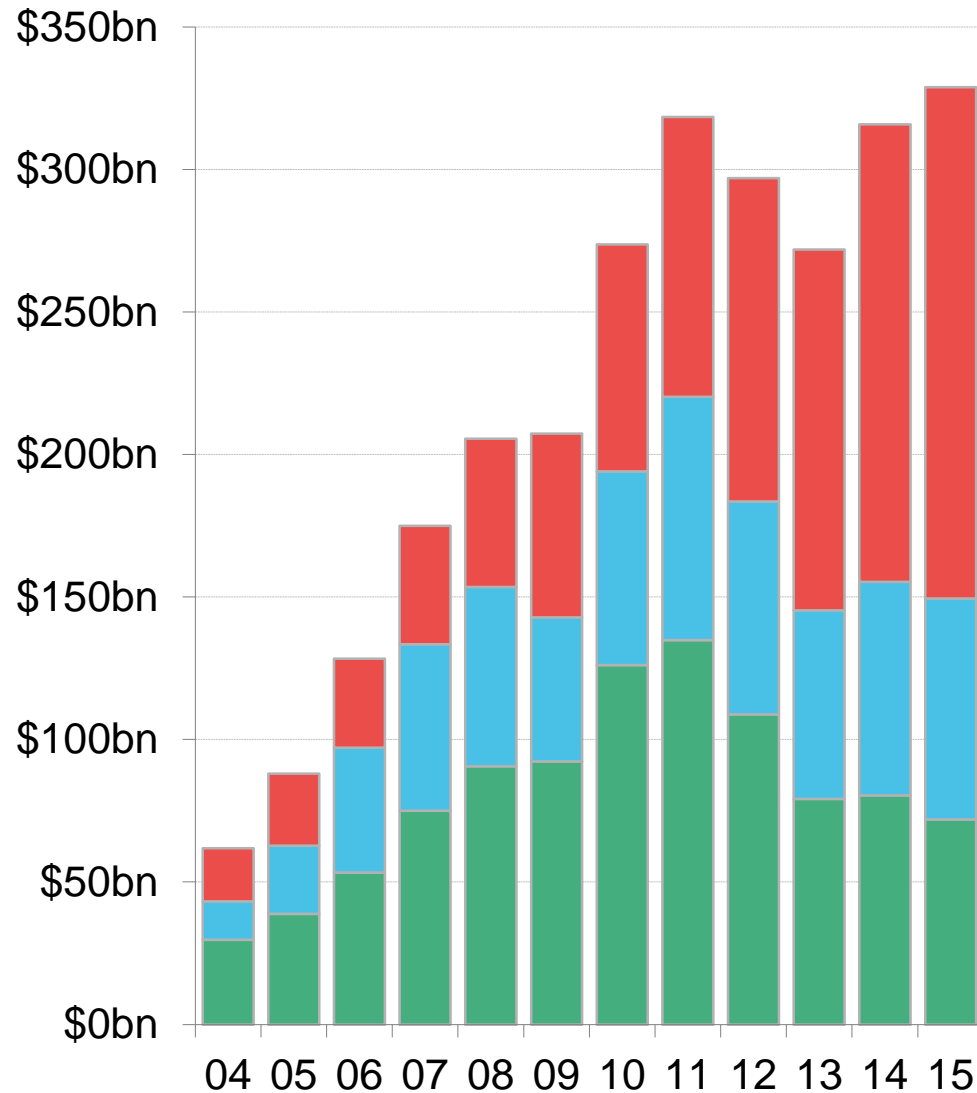


Note: nominal dollars

Source: Bloomberg New Energy Finance

# ASIA IS NOW THE LARGEST REGION FOR NEW INVESTMENT

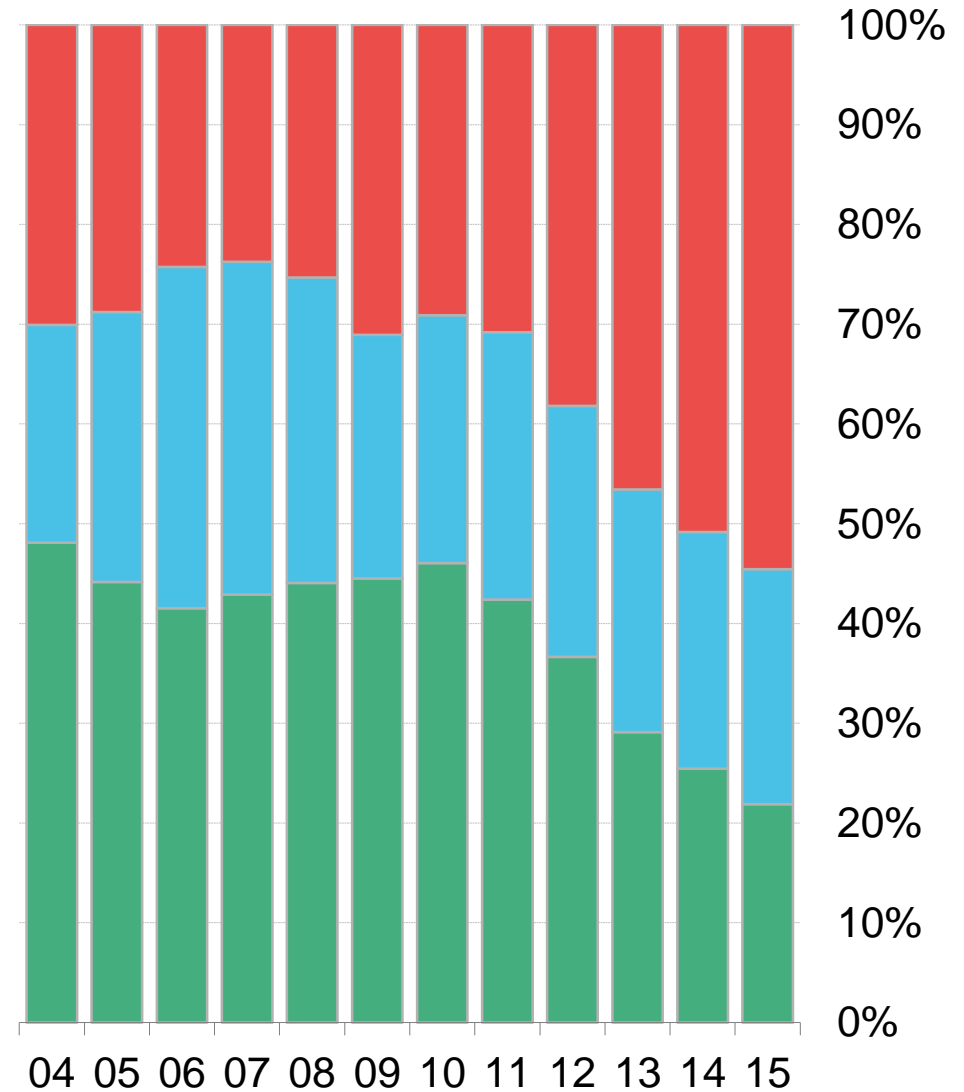
ANNUAL CLEAN ENERGY INVESTMENT, 2004 – 2015



APAC

AMER

EMEA

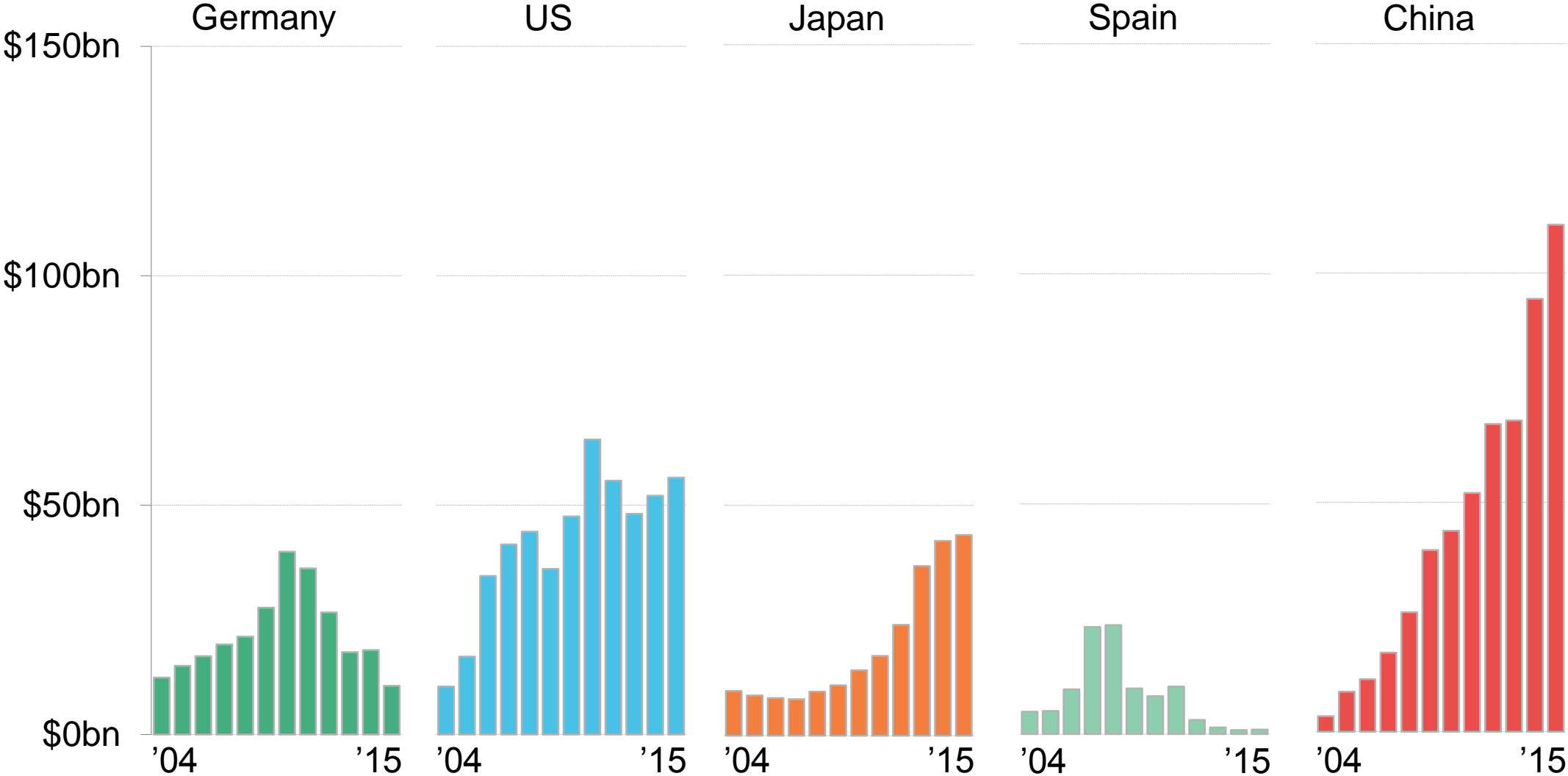


Note: nominal dollars

Source: Bloomberg New Energy Finance

# CHINA IS THE FIRST SINGLE \$100BN CLEAN ENERGY MARKET

ANNUAL CLEAN ENERGY INVESTMENT IN FIVE COUNTRIES, 2004 – 2015

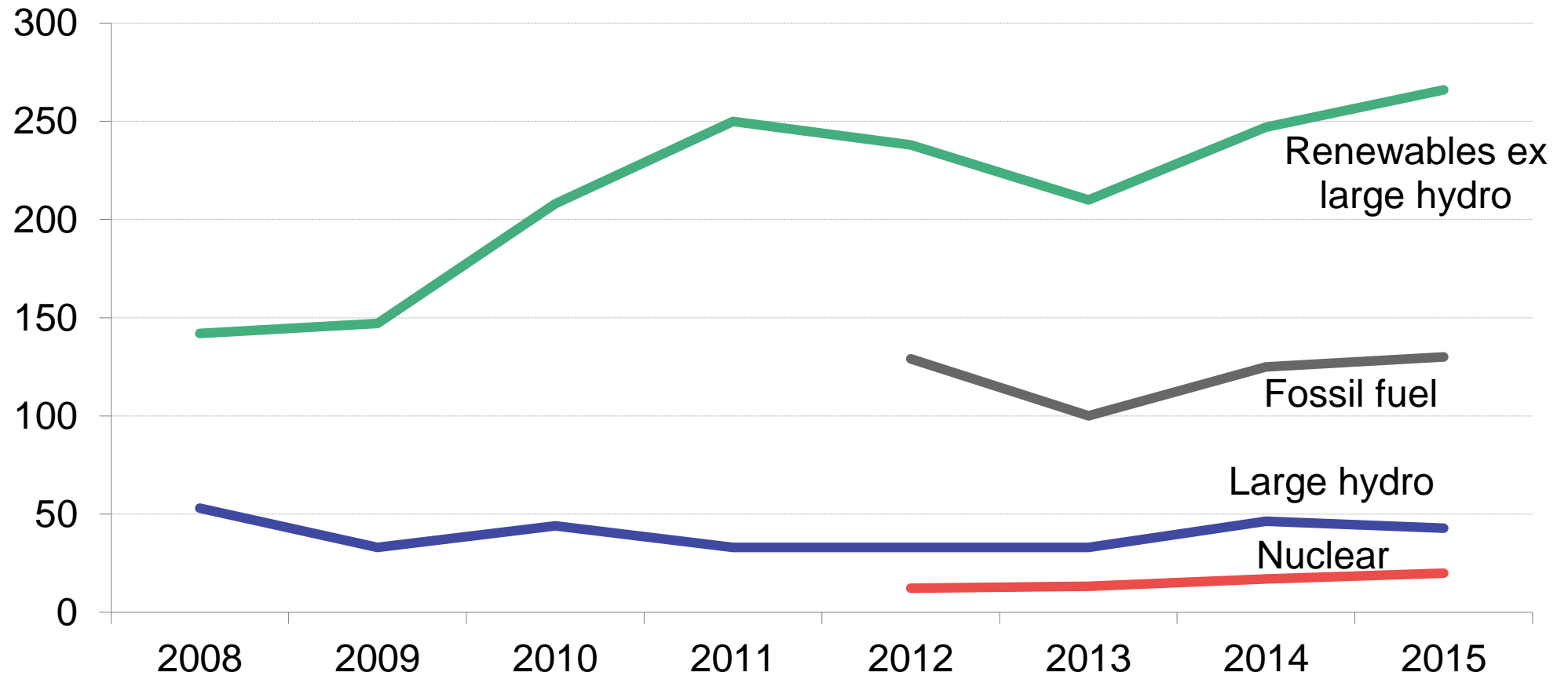


Note: nominal dollars

Source: Bloomberg New Energy Finance

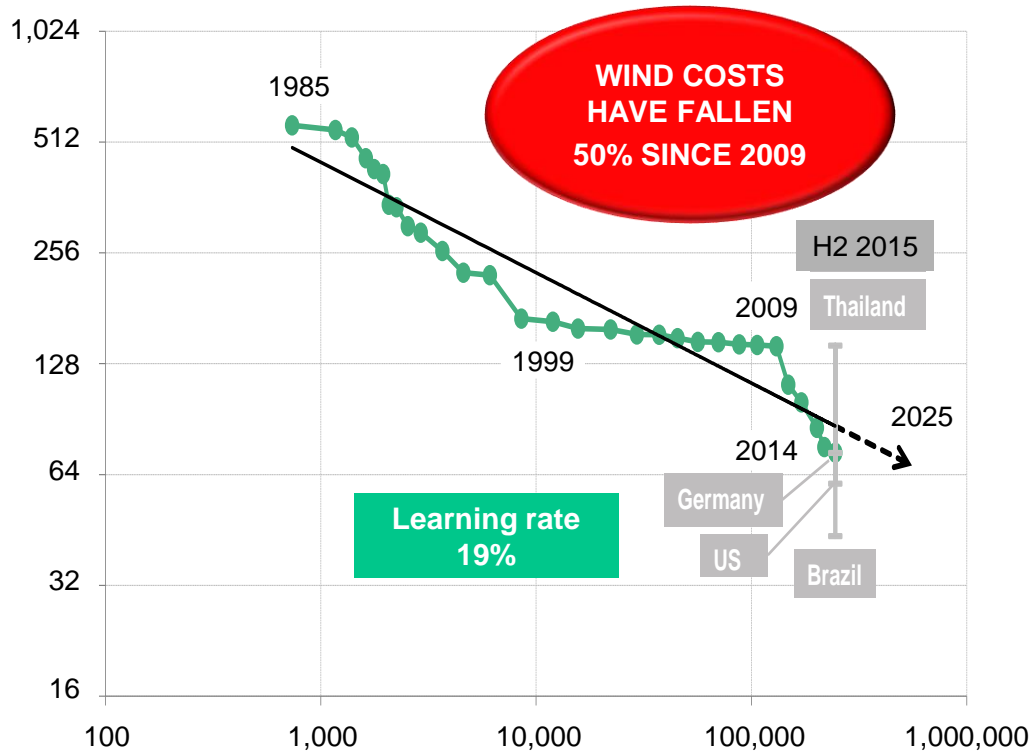
# INVESTMENT IN POWER CAPACITY, 2008–15

(\$BN)



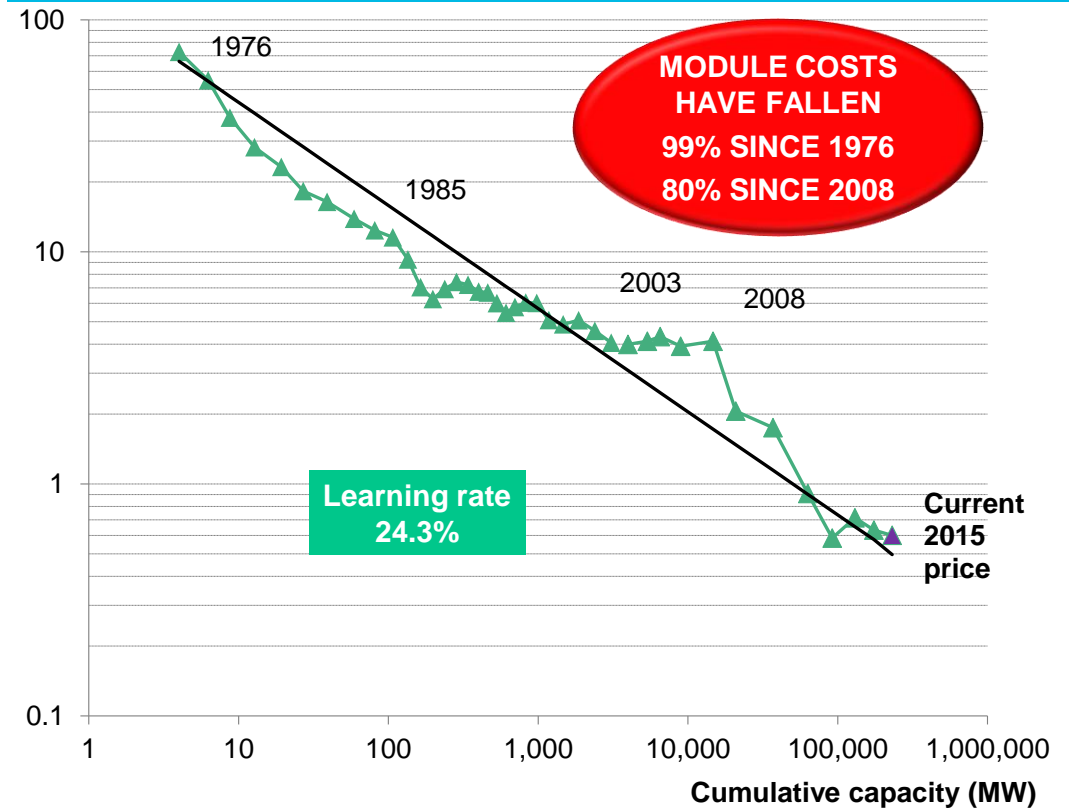
Source: UNEP, Bloomberg New Energy Finance

## ONSHORE WIND LEVELISED COST (\$/MWh)



Note: Pricing data has been inflation corrected to 2014. We assume the debt ratio of 70%, cost of debt (bps to LIBOR) of 175, cost of equity of 8% Source: Bloomberg New Energy Finance

## SOLAR PV MODULE COST (\$/W)



Note: Prices are in real (2015) USD. 'Current price' is \$0.61/W Source: Bloomberg New Energy Finance, Maycock

# WORLD RECORD: 3-CENT WIND, SUB-4-CENT SOLAR (UNSUBSIDISED)

## ONSHORE WIND



Location: Morocco  
Bidder: Enel Green Power  
Signed: January 2016  
Price: **US\$ 3.0 c/kWh**

## SOLAR PV



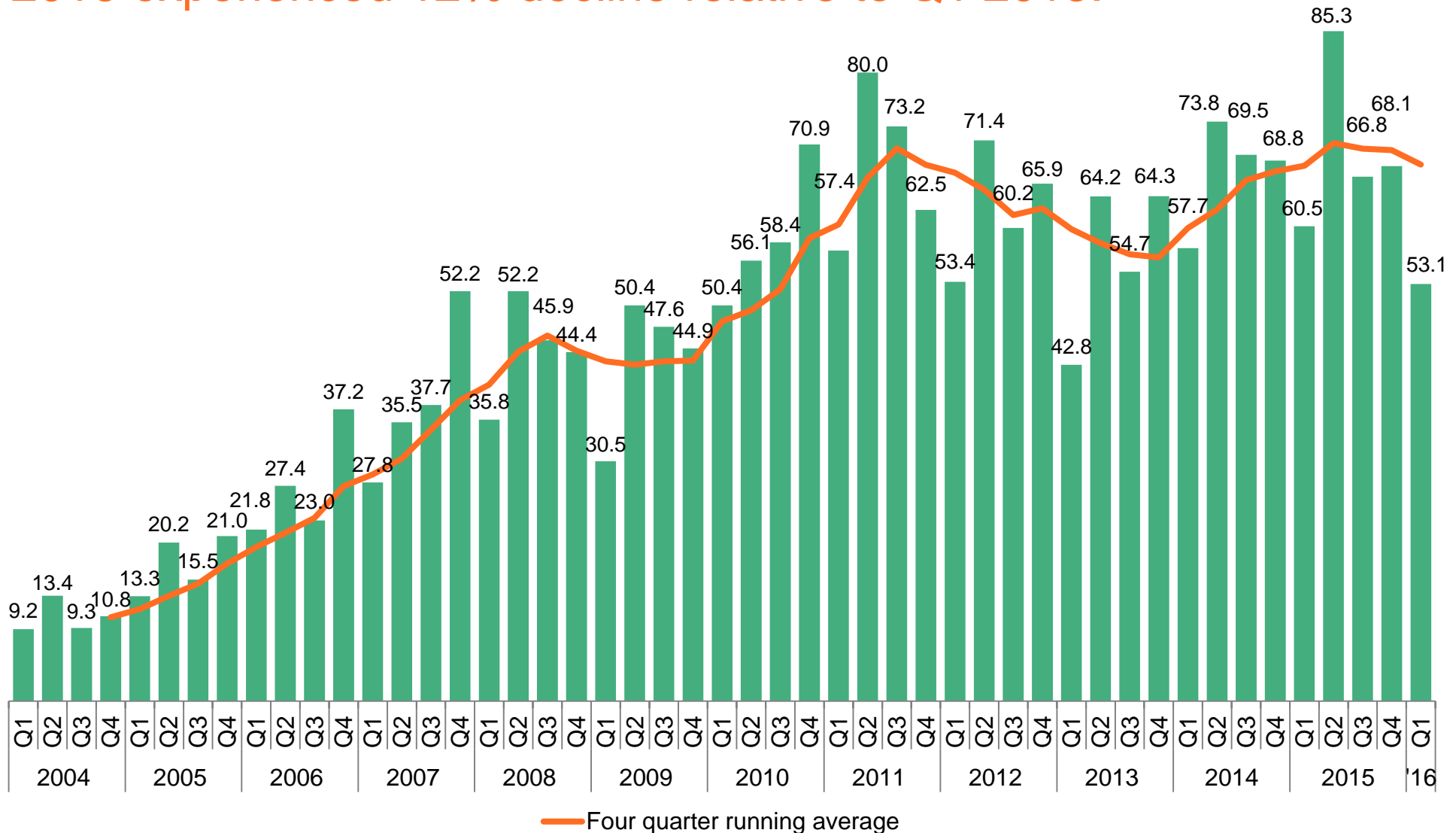
Location: Coahuila, Mexico  
Bidder: Enel Green Power  
Signed: March 2016  
Price: **US\$ 3.6 c/kWh**



# NEW INVESTMENT IN CLEAN ENERGY

Q1 2004-Q1 2016 (\$BN)

Q1 2016 experienced 12% decline relative to Q1 2015.



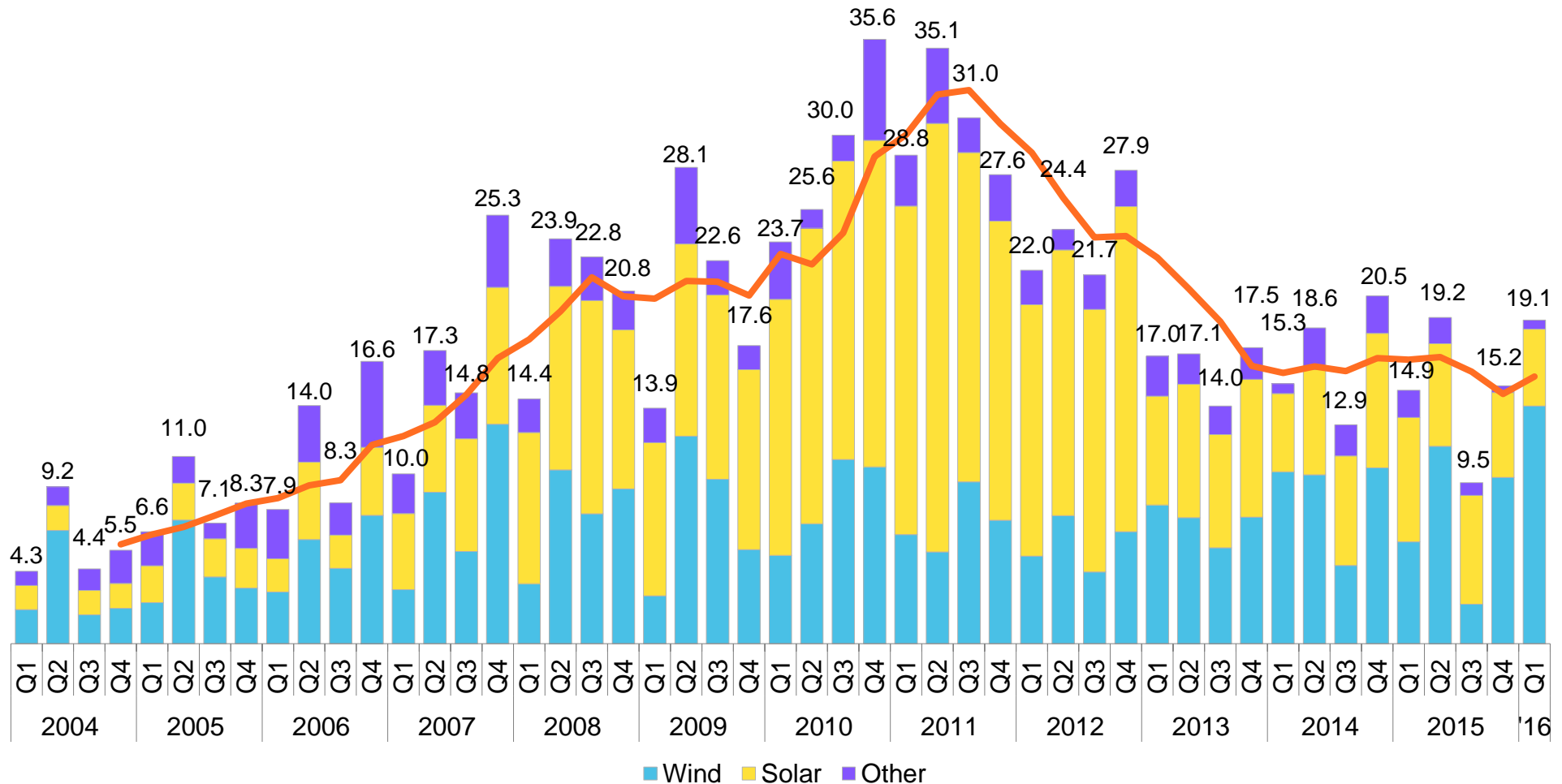
Note: Total values include estimates for undisclosed deals. Excludes corporate and government R&D, and spending for digital energy and energy storage projects (reported in annual statistics only).

Source: Bloomberg New Energy Finance



# EMEA NEW INVESTMENT IN CLEAN ENERGY BY SECTOR Q1 2004-Q1 2016 (\$BN)

EMEA was the only region showing growth in Q1 2016: +28% YoY

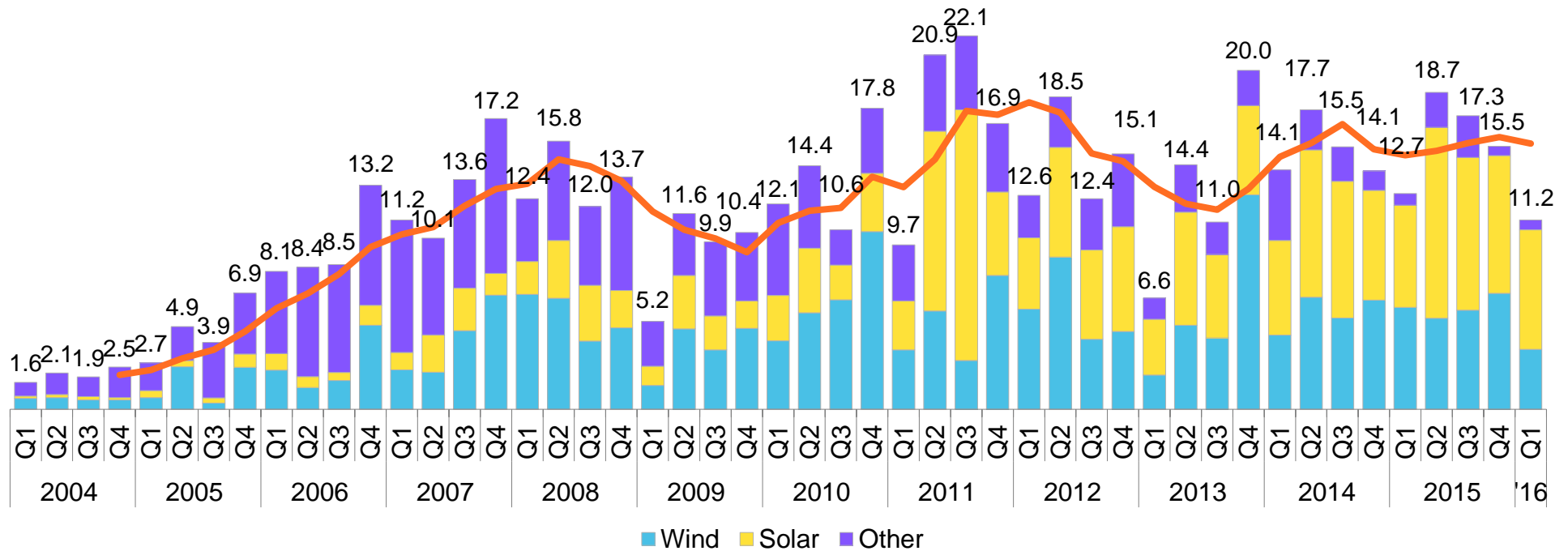


Note: Total values include estimates for undisclosed deals. Excludes corporate and government R&D, and spending for digital energy and energy storage projects (reported in annual statistics only).

Source: Bloomberg New Energy Finance

# AMER NEW INVESTMENT IN CLEAN ENERGY BY SECTOR Q1 2004-Q1 2016 (\$BN)

Americas declined in Q1 2016: -12% YoY

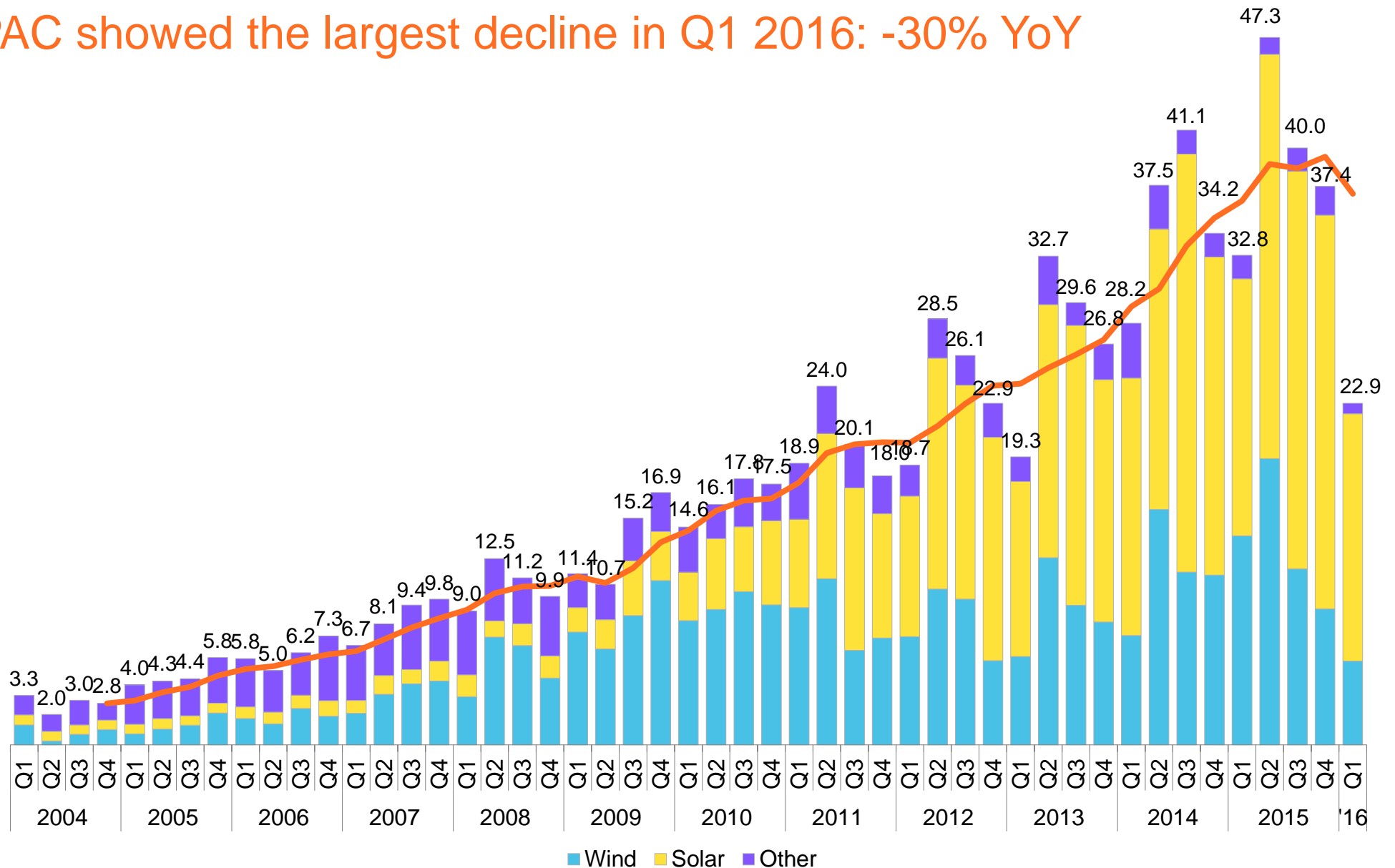


Note: Total values include estimates for undisclosed deals. Excludes corporate and government R&D, and spending for digital energy and energy storage projects (reported in annual statistics only).

Source: Bloomberg New Energy Finance

# APAC NEW INVESTMENT IN CLEAN ENERGY BY SECTOR Q1 2004-Q1 2016 (\$BN)

APAC showed the largest decline in Q1 2016: -30% YoY



Note: Total values include estimates for undisclosed deals. Excludes corporate and government R&D, and spending for digital energy and energy storage projects (reported in annual statistics only).

Source: Bloomberg New Energy Finance

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Gas  
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