

# CLIMATE POLICY INITIATIVE

GUY TURNER, DIRECTOR, CARBON MARKETS

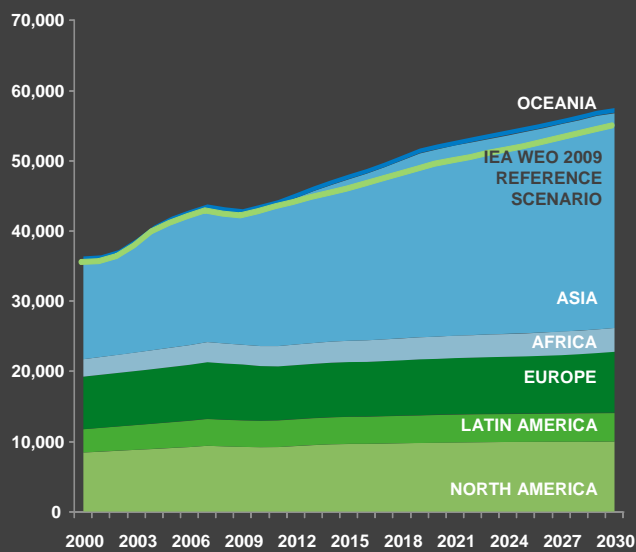
BLOOMBERG NEW ENERGY FINANCE

14 APRIL 2010

PHOTO BY BLOOMBERG

## GLOBAL EMISSIONS

MtCO<sub>2</sub>e



WORLD CO<sub>2</sub>E EMISSIONS WILL INCREASE UNDER BUSINESS AS USUAL (BAU) BY **33% BY 2030**

OF THIS GROWTH:

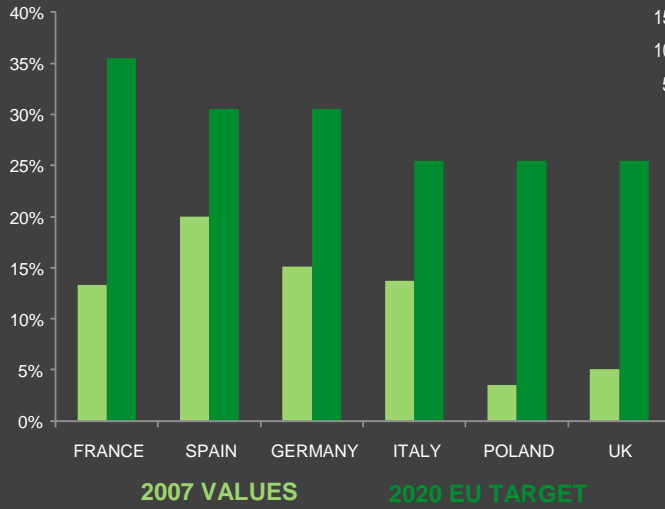
**55% WILL COME FROM CHINA**

**11% WILL COME FROM INDIA**

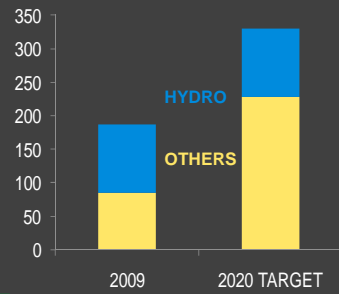
Source: Bloomberg New Energy Finance, GE2M analysis

# EU CLEAN ENERGY TARGETS

% of gross electricity consumption generated from renewable sources

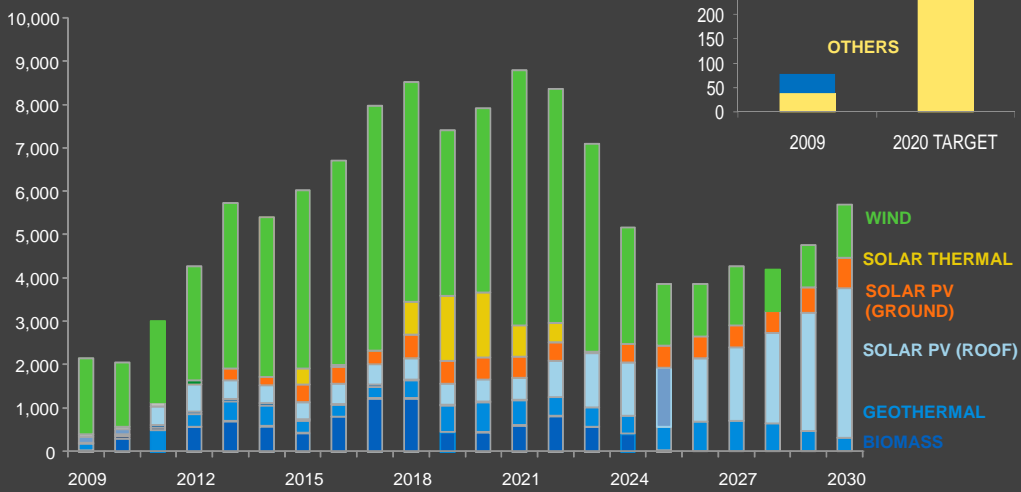


GW

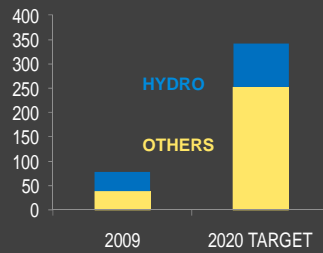


# US RPS BUILD REQUIREMENT

MW



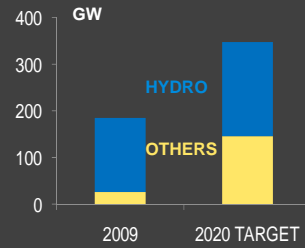
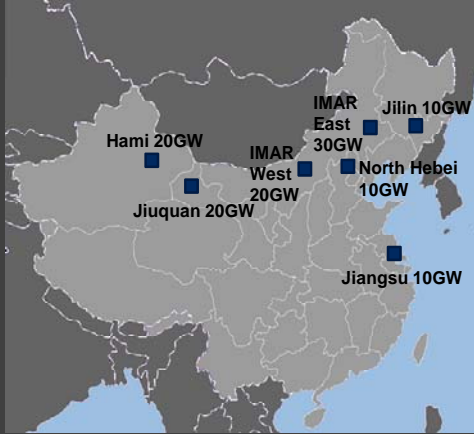
GW



Source: Bloomberg New Energy Finance, US REC model

# CHINA

## CHINESE WIND MEGABASES

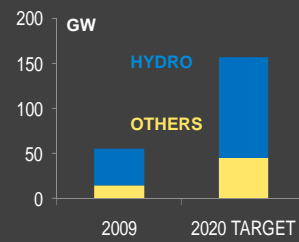
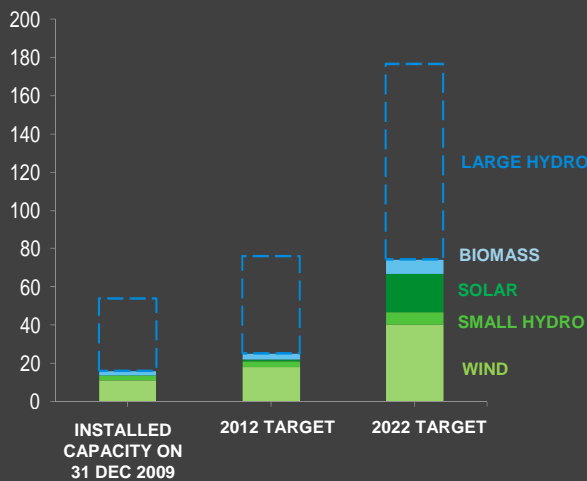


INSTALLED CAPACITY 2009: **25GW (3%)**

TARGET: **120GW OF WIND CAPACITY** INSTALLED BY 2020 AT 'MEGABASES'

INCLUDING OFFSHORE COULD BE **200-250MW BY 2020** (23-29% OF POWER GENERATION CAPACITY)

# INDIA CLEAN ENERGY POLICIES

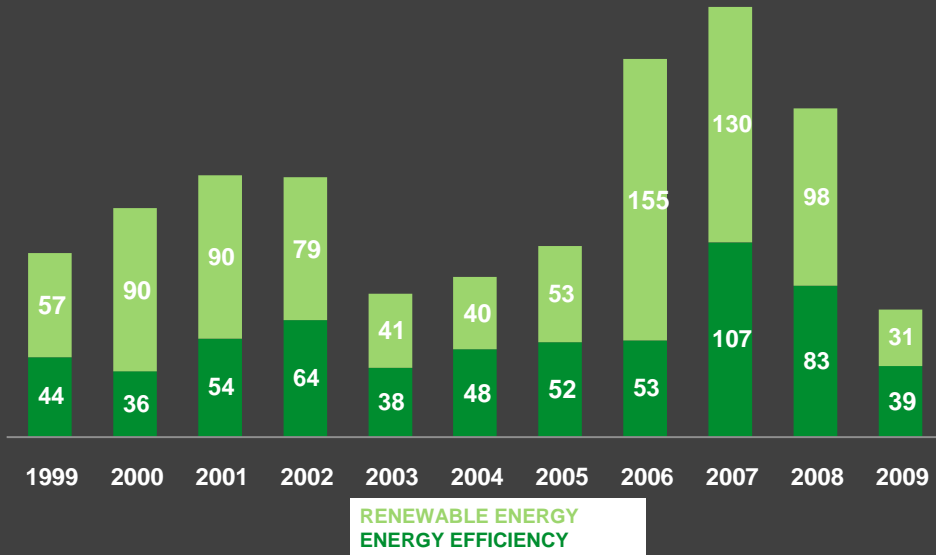


## RENEWABLE CAPACITY

2010: 10%  
2012: 11%  
2022: 16% (160GW)

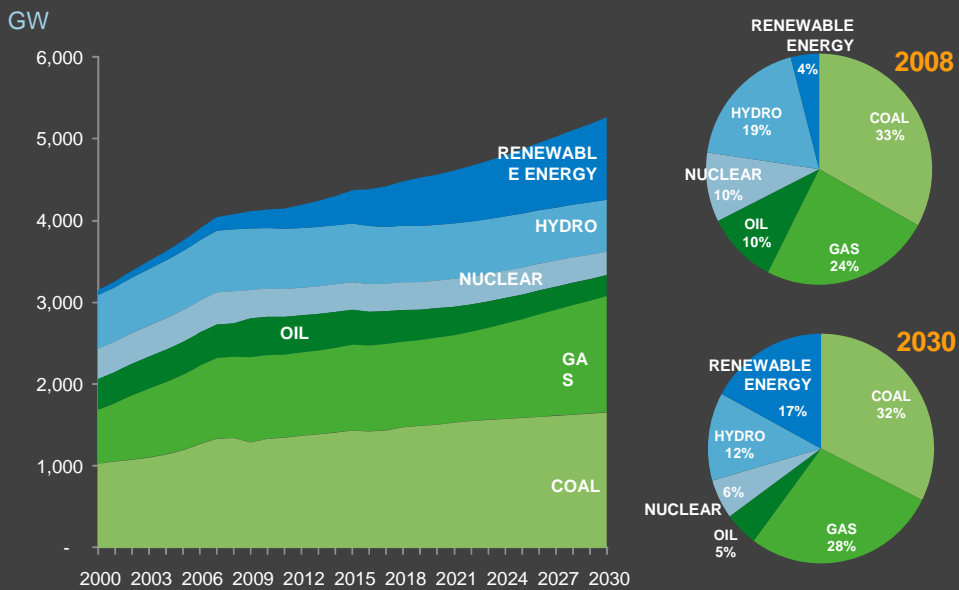
SOLAR MISSION TARGET **1GW BY 2013**

## CLEAN ENERGY POLICY DEVELOPMENT, 1999–2009



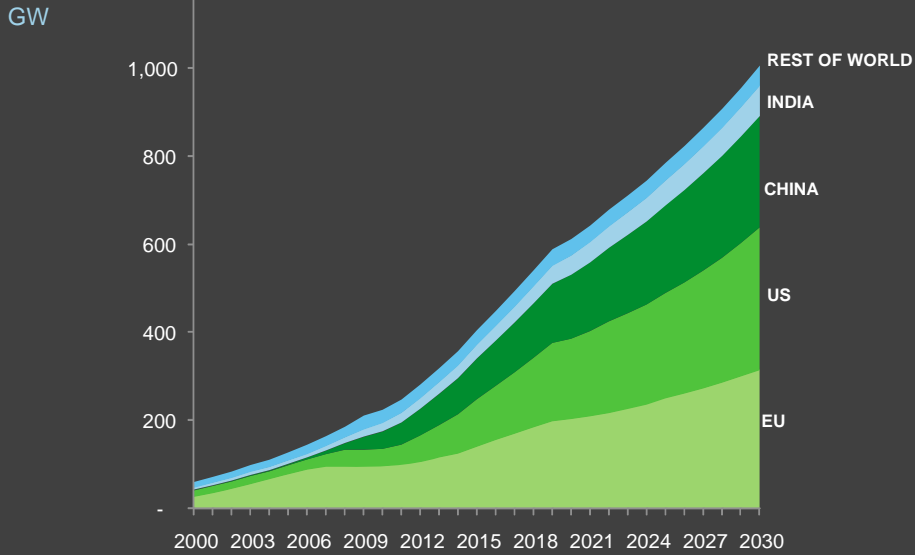
Source: Bloomberg New Energy Finance

## POWER GENERATION CAPACITY BAU



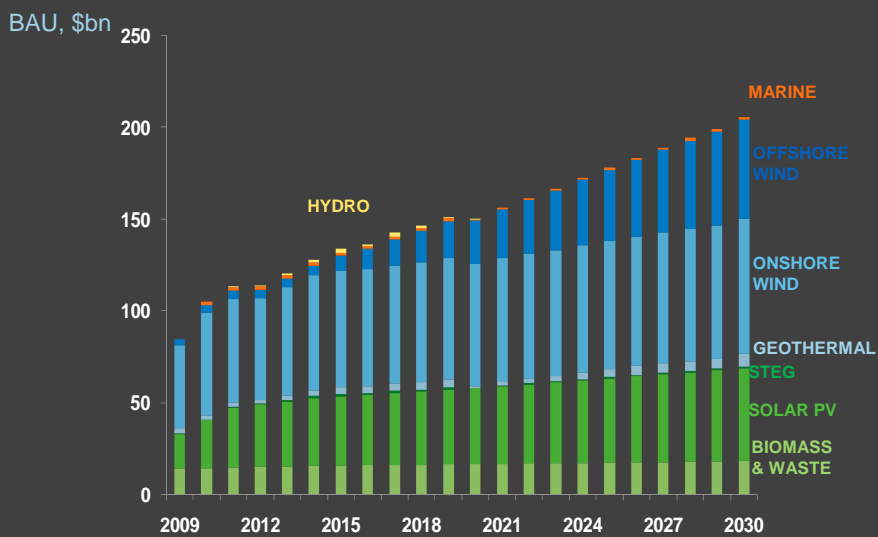
Source: Bloomberg New Energy Finance, GE2M analysis

# RENEWABLE POWER GENERATION CAPACITY – BAU



Source: Bloomberg New Energy Finance, GE2M analysis

# ANNUAL INVESTMENT IN RENEWABLE ENERGY ASSETS

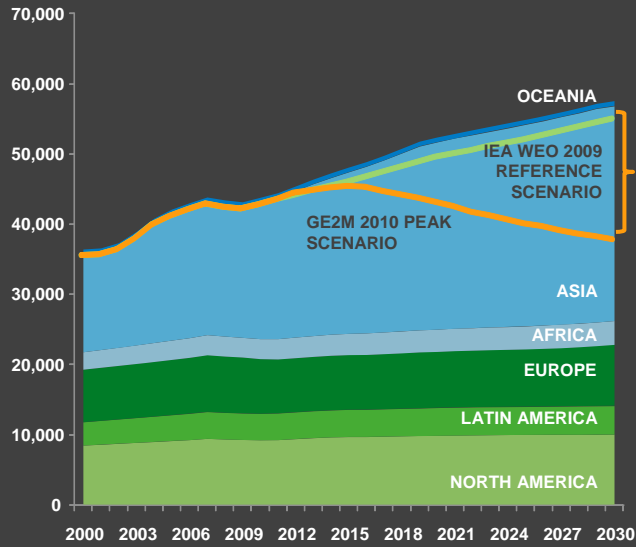


Source: Bloomberg New Energy Finance, GE2M analysis

Note: only includes asset investment. Excludes other form of investment which typically adds a further 50% to asset investments

# GLOBAL EMISSIONS

MtCO<sub>2</sub>e



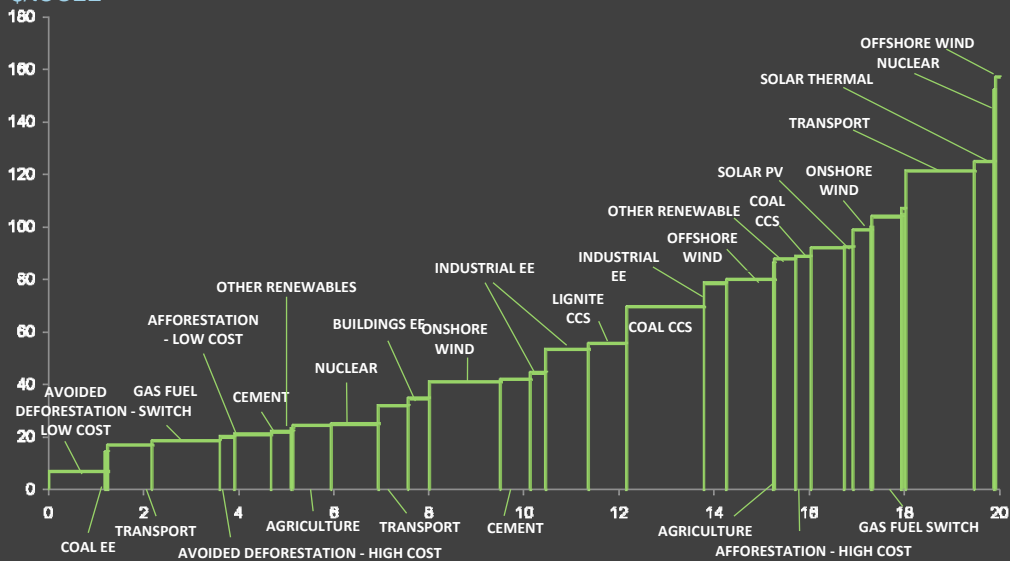
“PEAK SCENARIO”  
NEEDS TO GET TO  
39GT BY 2030 ON  
WAY TO 25GT BY 2050  
– A REDUCTION OF  
19GT IN 2030

CAN BE ACHIEVED BY  
\$65/TCO<sub>2</sub> TAX IN 2013  
RISING TO \$100 /TCO<sub>2</sub>  
BY 2030

Source: Bloomberg New Energy Finance, GE2M analysis

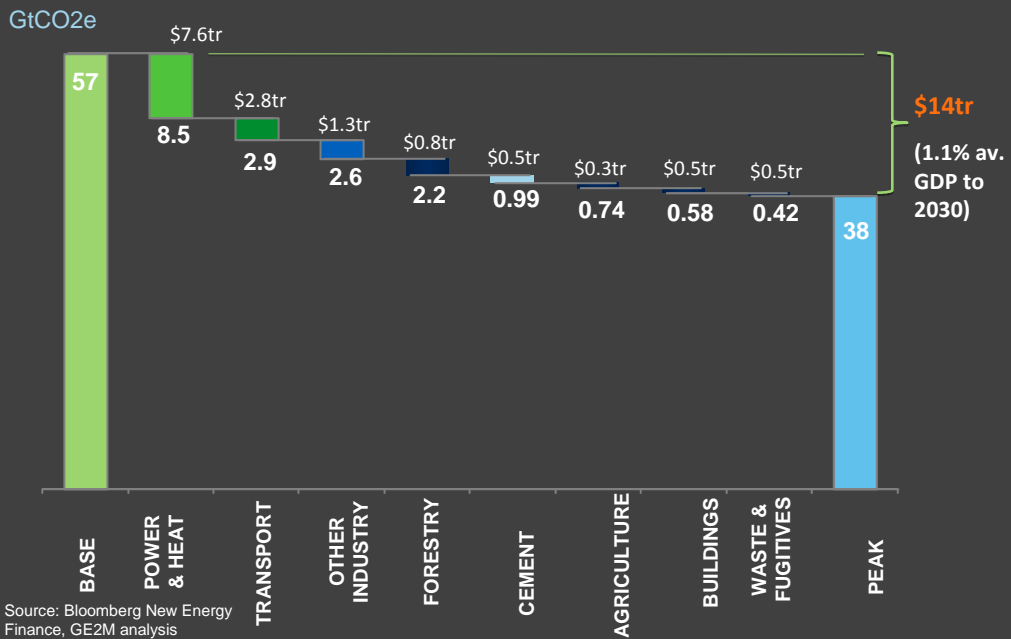
# 2030 GLOBAL MACC

\$/tCO<sub>2</sub>e

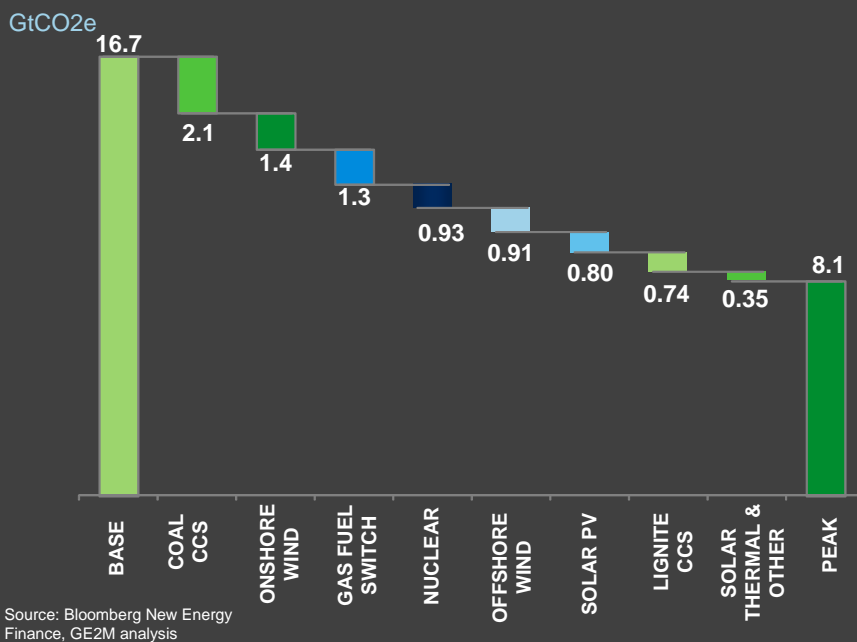


Source: Bloomberg New Energy Finance, GE2M analysis

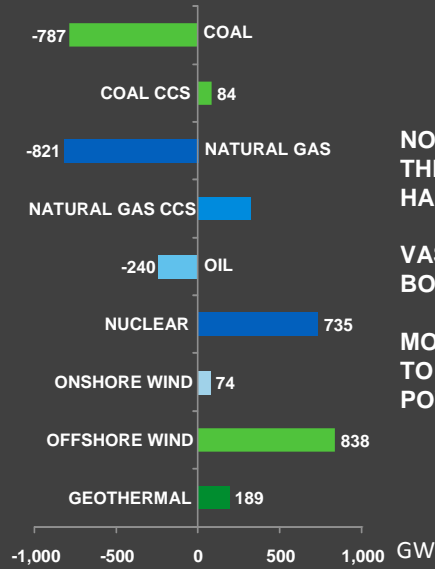
## 2030 ABATEMENT BY SECTOR – “PEAK”



## 2030 POWER SECTOR ABATEMENT – “PEAK”



## CHANGE IN POWER GENERATION REQUIRED IN 2030



NON-CCS RETROFITTED THERMAL PLANT HIT THE HARDEST

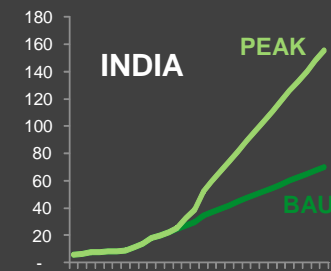
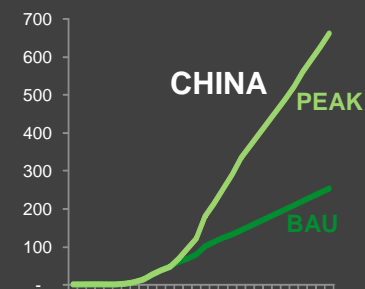
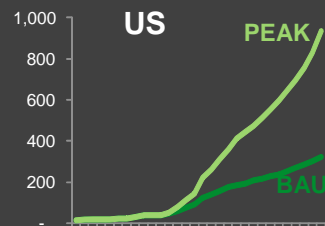
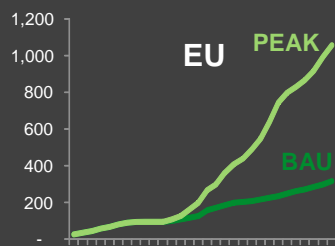
VAST EXPANSION IN WIND, BOTH ON AND OFFSHORE

MORE NUCLEAR NEEDED TO REPLACE BASELOAD POWER

Source: Bloomberg New Energy Finance, GE2M analysis

## RENEWABLE ENERGY CAPACITY

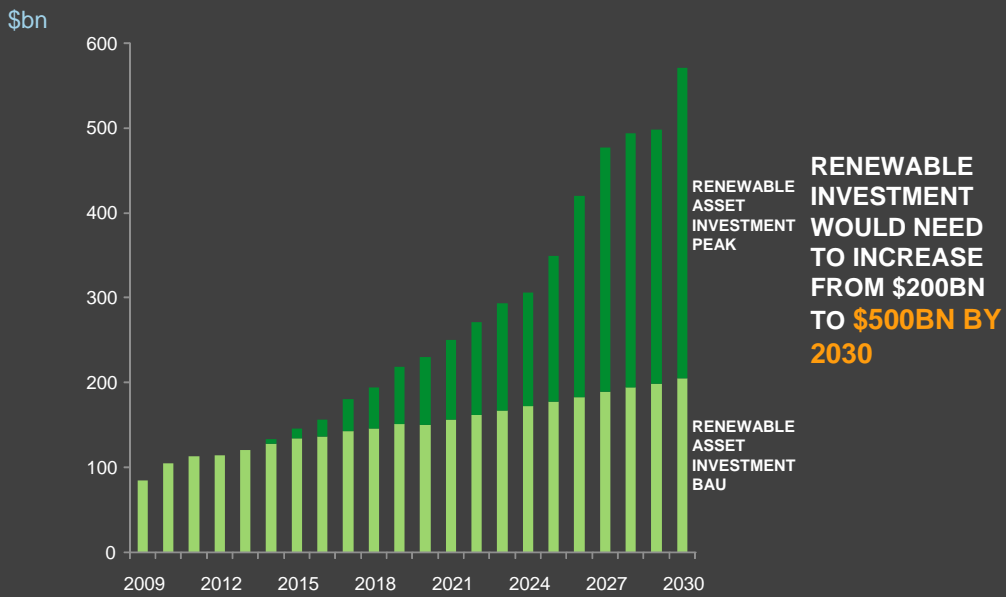
GW



Source: Bloomberg New Energy Finance, GE2M analysis



# RENEWABLE ENERGY ASSET INVESTMENTS



Source: Bloomberg New Energy Finance, GE2M analysis

**GUY TURNER**  
**DIRECTOR, CARBON MARKETS**  
 gturner10@bloomberg.net  
 +44 20 3216 4086

**SERVICES:**

- INDUSTRY INTELLIGENCE: DATA & ANALYTICS
- INSIGHT: RESEARCH & ANALYSIS
- FORECASTING: CARBON & GLOBAL ENERGY
- CUSTOM & CONSORTIUM RESEARCH
- NEWS & COMMENTARY
- EXECUTIVE BRIEFINGS & WORKSHOPS

[www.newenergyfinance.com](http://www.newenergyfinance.com)

SUBSCRIPTION-BASED NEWS, DATA AND ANALYSIS TO SUPPORT YOUR DECISIONS IN CLEAN ENERGY AND THE CARBON MARKETS