



# Meeting the Cost – A Financial Perspective on Renewable Energy

Dr. Armin Sandhoevel, CEO Allianz Climate Solutions GmbH  
Chair Climate Change Working Group

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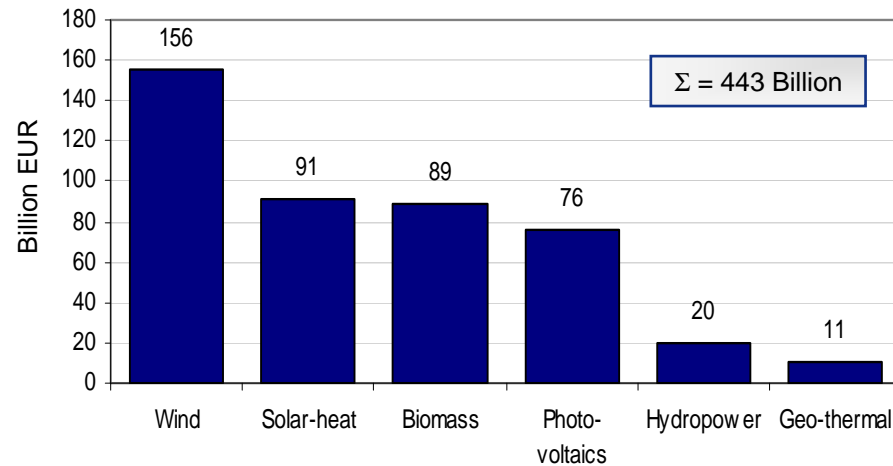
## UNEPFI key findings on renewable energy

- Investment capital flowing into renewable energy jumped from US\$ 80bn in 2005 to US\$ 100bn in 2006
- 176 clean energy funds have been set up, 150 disclosed almost US\$ 18bn under management (excluding infrastructure, technology and hedge funds)
- In 2006, US\$ 110-125bn was invested in new power generation globally, of which 18% were invested into renewables plant financing
- Financial institutions serve as a principal facilitator and provider of capital

\* toe: tons of oil equivalent

## Investment volumes and high growth rates in Europe make this sector attractive in the long term

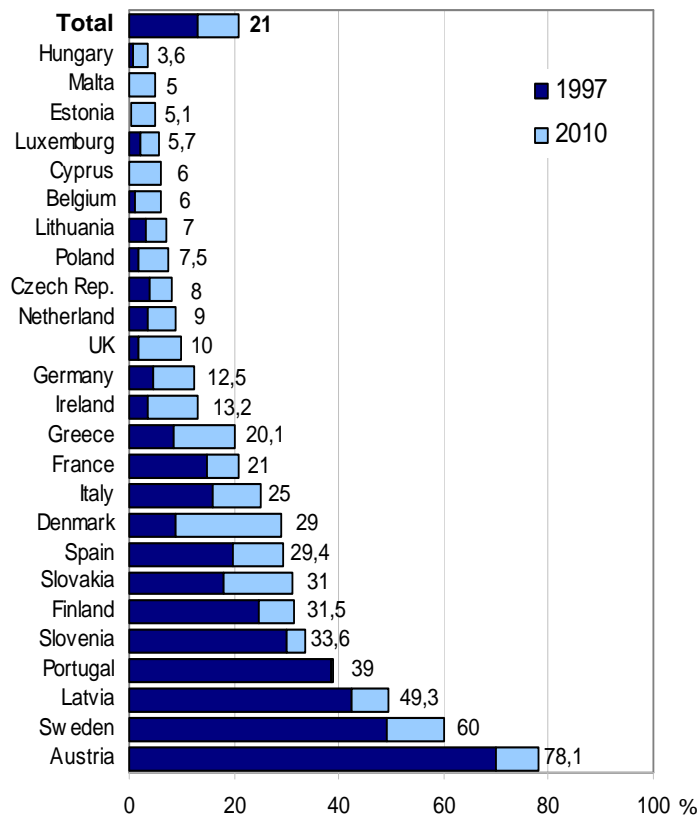
### Projected investment in RE in Europe (2001-2020)



- In order to raise the EU's share of renewable energies to 20% by 2020, investments of EUR 443 bn are expected (2001-2020)
- The highest investments and growth rates will occur in wind and solar energy
- Growth in biomass technologies and geothermal power will be notable (depending on countries and regions)

## Renewable energies experience a rapid development in Europe

### Planned Share RE of energy supply by 2010 in Europe

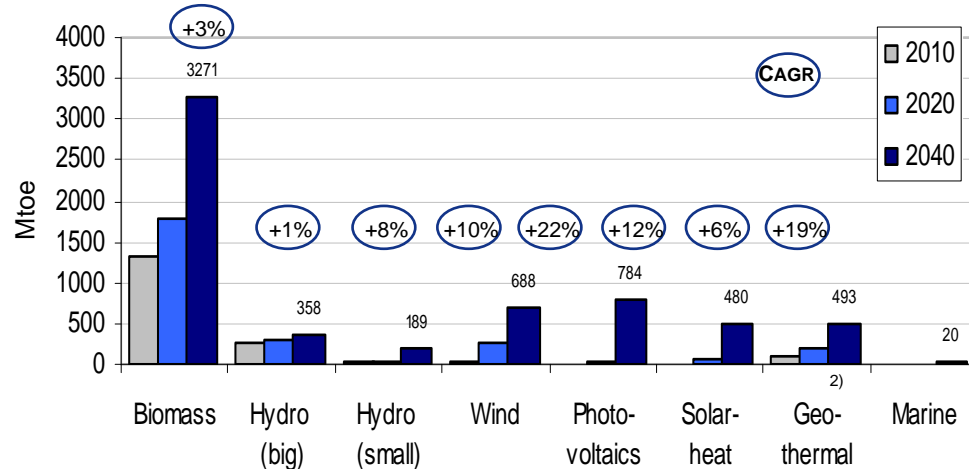


- Development is significantly supported by the EU's target to raise the share of renewables in total energy consumption to 20% by 2020
- The share of renewable energy in electricity generation shall grow to 21% by 2010 (1997: 12.9%)
- RE sector is attracted by bundled solutions incl. insurance, financing, equity, asset management

Source: BMU

## Investment volumes and high growth rates in developing countries: the case of China

### Annual consumption of RE worldwide (2010-2040)<sup>1)</sup>



- Given its rapidly growing energy demand, China is a pivotal player in global climate protection & renewable energy markets
- Until 2030, China and India will account for 45% of the increase in energy demand by 2030
- By 2020 China will invest 150bn Euro in renewable energy in order to generate 300 GW hydropower, 30 GW wind, 20 GW biomass und 1 GW solar power per year

Sources: EREC, IEA

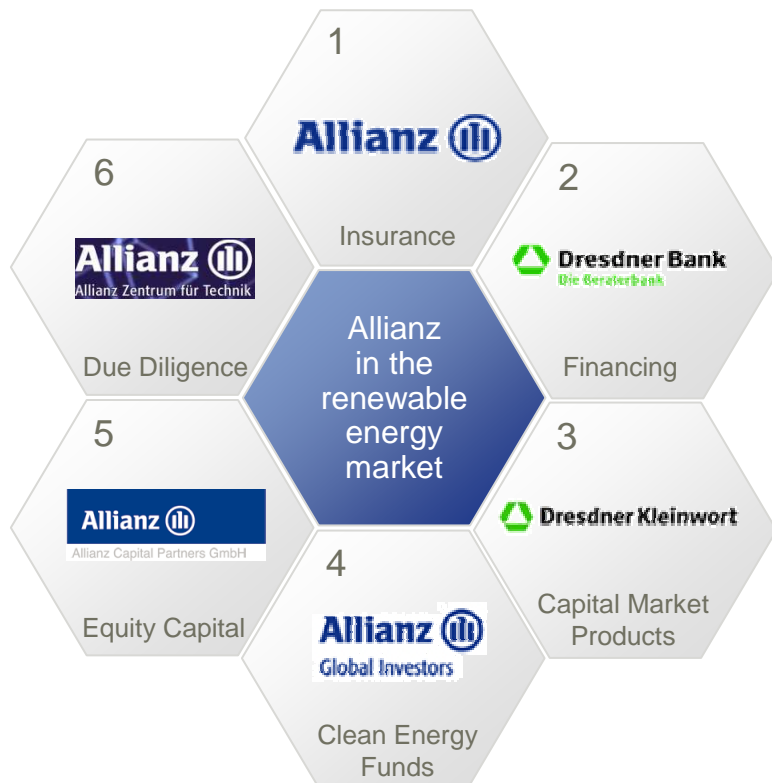
1) incl. annual growth rates in percent 2) Tidal and wave power

## CDM & the RE market: Less attractive?

- Around 60% of existing CDM projects invest in RE, but only 15% of generated CERs are from this sector
- Facts reducing attractiveness of including carbon components into RE investments:
  - Cash flow modeling based on feed-in-tariffs, prices from fossil fuels and sinking manufacturing costs
  - High level of costs of RE investments, but small part of IRR of carbon component
  - High transaction costs (bureaucratic regulations)
  - Investment horizons of RE (12-20 years) not compatible with insecure perspective of Post 2012

\* toe: tons of oil equivalent

## Renewable energies: Tailor-made products to participate in global growth trend



- 1 Insurance products
- 2 Financing activities
- 3 Project financing, equity & debt placement, IPO and asset acquisition
- 4 Funds in clean energy market
- 5 Acquisition of renewable energy assets and investment opportunities
- 6 Due diligence for business and technical issues, technical advice

▶ Cross-selling supported by full product range

## UNEPFI key recommendations to policy makers

Promote a significant expansion of investments in renewable energy and energy efficiency. This can be achieved by:

- Leveling the playing field with conventional fuels, for example through removing subsidies for dirtier, less efficient production and uses
- Setting ambitious goals for renewable energy generation with clear support mechanisms and so reflecting environmental, security and supply benefits
- In the long-run competitiveness of RE sector must be key driver of investments



## Contact

**Dr. Armin Sandhoevel**

Chair UNEPFI Climate Change Working Group

Allianz Climate Solutions GmbH

Theresienstrasse 1-5

80333 Munich, Germany

Tel. +49.89.3800 12203

Email: [armin.sandhoevel@allianz.com](mailto:armin.sandhoevel@allianz.com)