

# Impact of C prices on Investment decisions..... Looking at renewable energy

EPRI-IEA-IETA

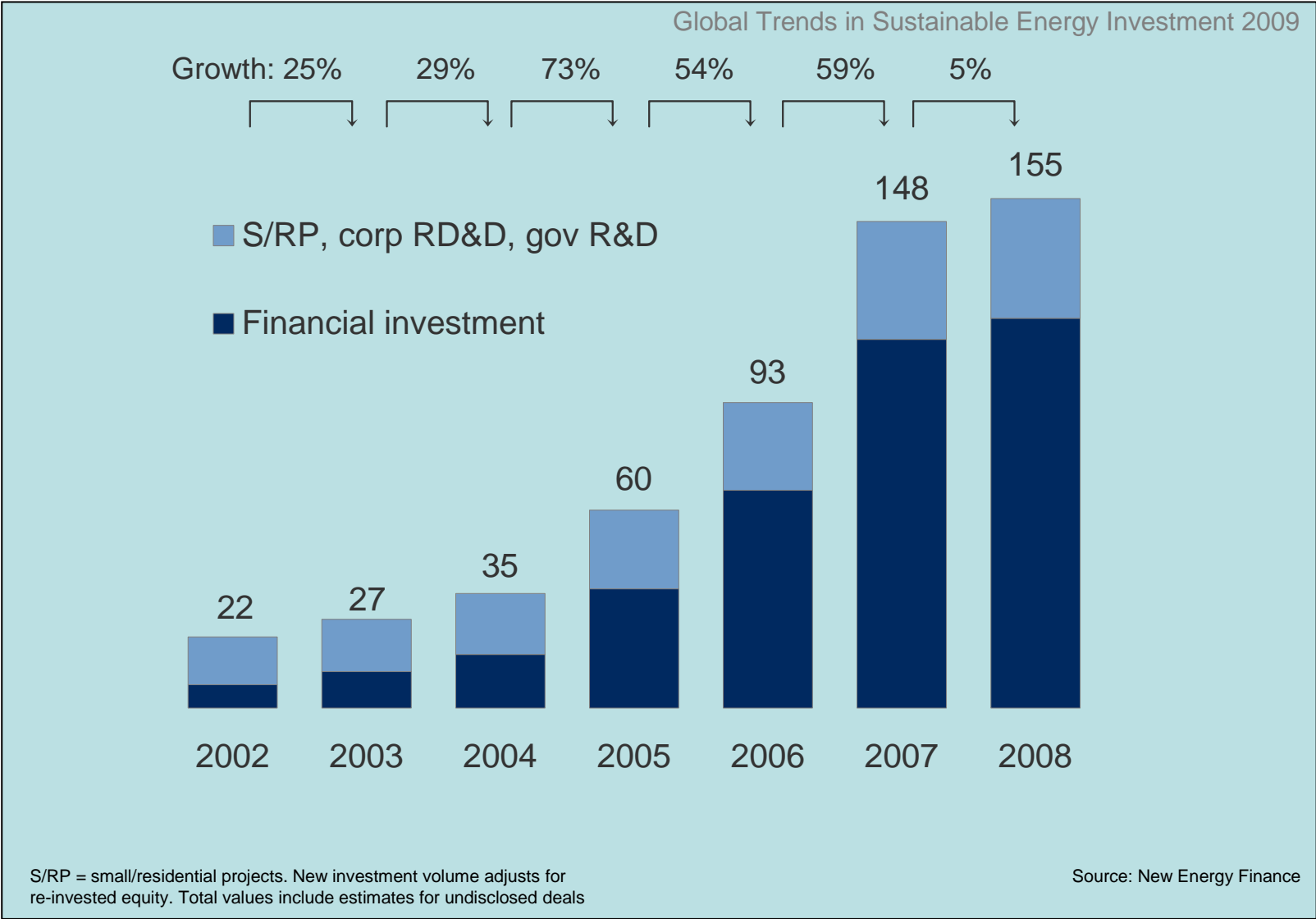
9<sup>th</sup> Annual Workshop on GHG Emissions Trading,

14 Sept 2009

Kirsty Hamilton, Associate Fellow

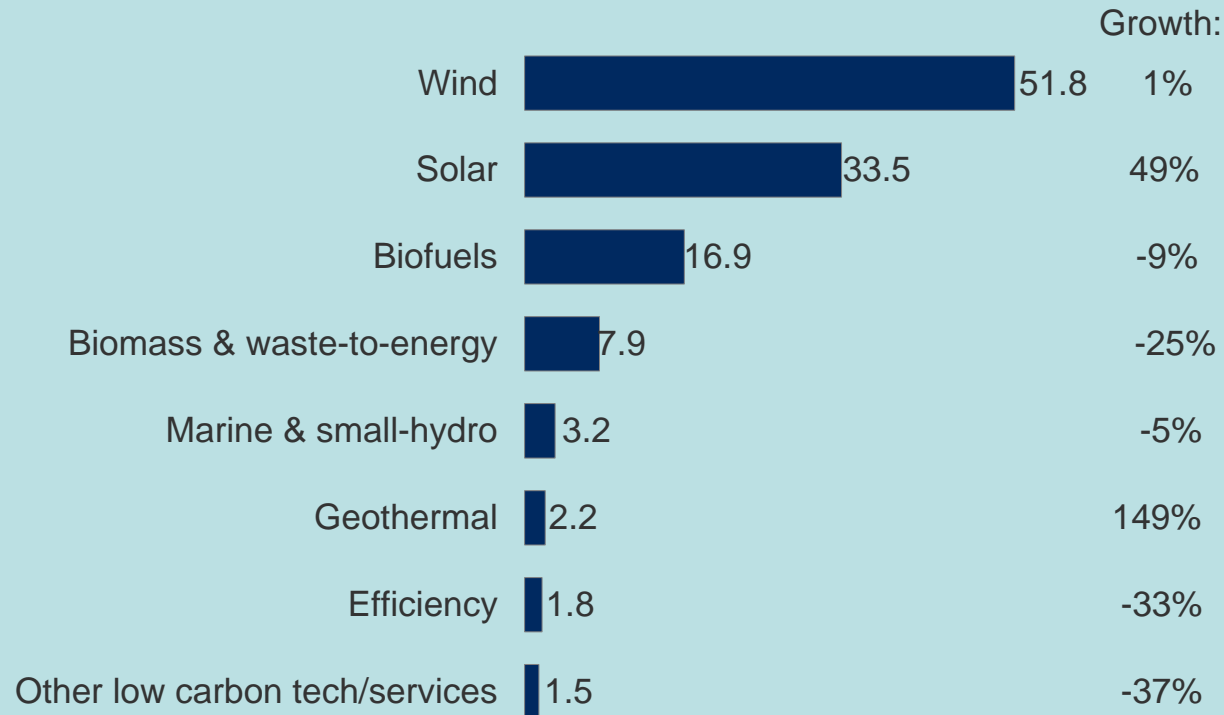
Renewable Energy Finance Project, Chatham House

# Global New Investment in Sustainable Energy, 2002-2008,



# Financial New Investment, by Technology, 2008 and growth

Global Trends in Sustainable Energy Investment 2009

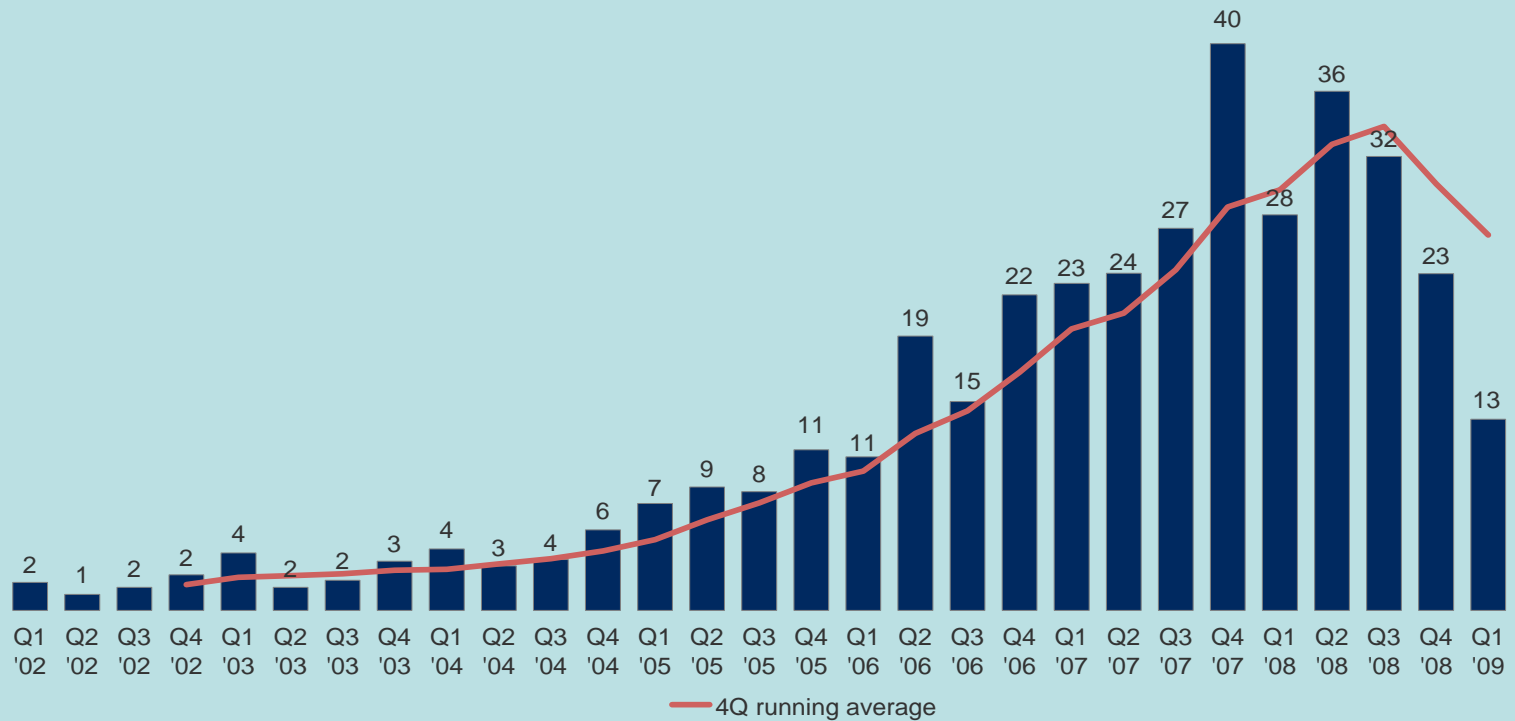


New investment volume adjusts for re-invested equity.  
Total values include estimates for undisclosed deals

Source: New Energy Finance, UNEP SEFI

# Global Financial New Investment Quarterly Trend, Q1 2002 - Q1 2009, \$ billions

Global Trends in Sustainable Energy Investment 2009



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Source: New Energy Finance

# What driving RE investment? – evidence base

- Risk adjusted returns have to be commercially attractive
- Public policy is an absolutely central factor: covering all relevant parts of energy system+
- Stability, duration, design of public policy ('long, loud and legal')
- Clarity over policy objectives (what point govt steps in to review/change things);
- Simplicity – complex trading (RE) doesn't nec help asset financiers
- Emerging markets, additional factors but energy policy still key.

# Financial Crisis

- Significant liquidity constraints, esp banking, cost of capital; risk averse
- Deals slow, banks (PF) retrenching to home mkts, known relationships, low-risk tech, BUT still very strong interest in RE sector, ref mkt fundamentals
- Sense of market correction vis a vis 2007 heights: but will things go 'back to normal'?
- Robust policy even more important to build confidence; renewed interest in all markets in public finance (in UK, US – ARRA stimulus package; EIB)
- Debate: how to get greater involvement fm the institutional investors

# RE financiers view of where C fits in?

- Mostly seen as ‘icing on cake’ to date esp fm perspective of project finance [however, recent New Carbon Fin report indicating 90% of chinese wind projects now applying for carbon credits]
- Question raised at recent China REFF – is an ERPA bankable in a Project Finance context? How does risk look lined up against other factors [FirstClimate, Sudhir Bhat]
- Convergence of carbon and energy policy lumpy....twin track in most cases eg EU, Waxman-Markey.
- ‘Energy efficiency’ ....limited

# Clarity over objectives and policies designed to meet those

- Visibility over policy-driven changes to energy systems over next 20 years;
- ET - near term GHG cuts; longer term changes to energy mix/industrial policy – where do we expect the cross over?
- GHG caps/prices, not driving significant scaling up of either RE or EE, compared with energy policy, at present;
- Energy Policy needed to deliver key infrastructure-linked regulation (and linked public financing); wrt different subsectors of RE – different delivery infrastructure and supply chains;
- Arguably ‘low carbon’ agenda is really about integration at infrastructure level, and incentives/regulation – to optimise what the market can deliver over medium term – trading and en policy.



# Copenhagen - the implementation agenda

- RE Financiers: 'the deal' very important sign that govt is serious about climate agenda, ref anticipating market developments, i.e cascade down
- What mechanisms/funding available, and what this looks like nationally
- Design will be key (noting a lot of work on 'big numbers' ie public finance to leverage private investment [Stern; unepfi; wef; thinktanks etc])
- Looking ahead - competition for capital: which countries can provide the most commercially attractive conditions – using policy and public finance (GE, FT) – to access supply chain upside (jobs etc).

# EE investment – lender perspective

- Public finance – patchy (tendency to group EE, w RE, carbon finance); EEAs interesting – EBRD in lead
- Private finance – ‘perhaps the next goldmine’, little investment
- Financing issues: scale; EE as ‘asset’ problem; absence of loan guarantees where this might help; some innovation – esp in regulated markets (parts of US); ‘time and resources’ to develop new products and understand how to capture the value
- Policy issues: ‘Serious market failures exist in most jurisdictions’; high prices alone not sufficient (oil @\$148bbl); need clear RE-equiv policy signals w integration (incl utility policy and regulation)

UNEP Finance Initiative –EE & the Finance Sector Report

[http://www.unepfi.org/fileadmin/documents/Energy\\_Efficiency.pdf](http://www.unepfi.org/fileadmin/documents/Energy_Efficiency.pdf)