



# GLOBAL TRENDS IN SUSTAINABLE ENERGY INVESTMENT 2009

*Analysis of Trends and Issues  
in the Financing of  
Renewable Energy and  
Energy Efficiency*



UNITED NATIONS ENVIRONMENT PROGRAMME

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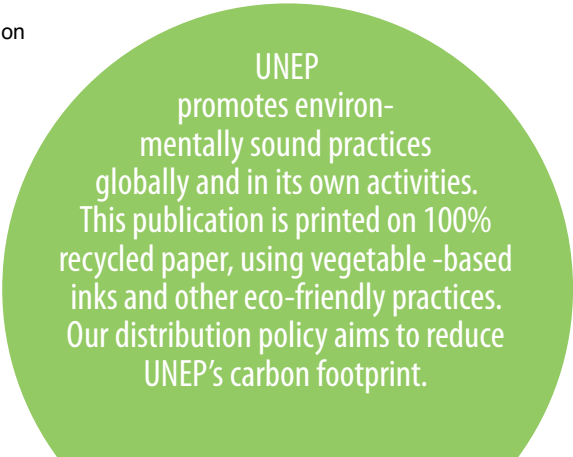
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## FOREWORD

The 2009 Global Trends in Sustainable Energy Investment report, considered by many to be the most authoritative appraisal of clean energy investment trends, is being released during one of the worst financial and economic crises for a generation with sharply rising unemployment in many parts of the globe.

It also comes less than six months before the crucial UN climate convention meeting taking place in Copenhagen, Denmark.

It is the view of the UN Environment Programme and increasingly others that a Green Economy approach to these and other emerging challenges, such as energy security, resource efficiency and catalyzing an innovation-based economy, go hand in hand.

Renewable energy, with its low carbon footprint, the relative speed with which it can be deployed into developed and developing communities alike and its ability to generate new kinds of businesses and green jobs, is a key element of that transition.

This year's Global Trends survey was never likely to show the kind of extraordinary growth in renewables that has underlined previous years. Nevertheless, investment in the sustainable energy market has in some ways defied the global recession growing by around five per cent—from \$148 billion in 2007 to around \$155 billion in 2008.

Support for sustainable energy investments will now depend on several factors. In response to the economic crisis the G-20 group of nations recently announced stimulus packages totalling \$3 billion, amounting to 2% of their GDP in 2009 and 1.5% in 2010.

Several economies, from China, Japan and many European ones to the Republic of Korea and the United States, have earmarked multi-billion investments in clean energy, including smart grids, under the banner of a global 'green new deal'.

While the \$155 billion sustainable energy investment in 2008 and the multi-billion stimulus packages can go a long way, investment needs to reach a half trillion dollars per annum by 2020 to help ensure a peak in greenhouse gas emissions by then.

Intelligent market mechanisms and incentives will also play a key role in both developed and developing economies, including a review of the well over \$200 billion a year spent on subsidising fossil fuels.

Perhaps the biggest stimulus package of them all will happen in Copenhagen if governments agree a scientifically-credible and forward-looking new climate agreement.

This will give certainty and continuity to the carbon markets and a clear signal that renewable energy will become an increasingly important slice of the overall 'fuel' mix and a major contributor to the sustainable development agenda, including achieving the poverty-related UN Millennium Development Goals.

**Achim Steiner**

UN Under-Secretary General and UN Environment Programme (UNEP) Executive Director

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## METHODOLOGY & DEFINITIONS

All figures in this report, unless otherwise credited, are based on the output of the Desktop database of New Energy Finance – an online portal to the world's most comprehensive database of investors, projects and transactions in clean energy.

The New Energy Finance Desktop collates all organisations, projects and investments according to transaction type, sector, geography and timing. It covers 26,000 organisations (including start-ups, corporates, venture capital and private equity providers, banks and other investors), 15,500 projects and 11,000 transactions.

### METHODOLOGY

The following renewable energy projects are included: all biomass, geothermal and wind generation projects of more than 1MW, all hydro projects of between 0.5 and 50MW, all solar projects of more than 0.3MW, all marine energy projects, and all biofuels projects with a capacity of 1m litres or more per year.

Annual investment in small scale and residential projects, such as micro wind turbines, solar water heaters and bio-digesters, is estimated. These estimates are based on annual installation data, provided by industry associations and REN21.

Energy efficiency investment includes financial investment in technology companies plus corporate and government investment in R&D. It excludes investment in energy efficiency projects by governments and public financing institutions. Where deal values are not disclosed, New Energy Finance assigns an estimated value based on comparable transactions. Deal values are rigorously back-checked and updated when further information is released about particular companies and projects. The statistics used are historic figures, based on confirmed and disclosed investment.

New Energy Finance continuously monitors investment in renewable energy and energy efficiency. This is a dynamic process: as the sector's visibility grows, information flow improves. New deals come to light and existing data is refined, meaning that historic figures are constantly updated.



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