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Global Trends in Sustainable Energy Investment 2008

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

United Nations Environment Programme

Endorsed by

REN21 Renewable Energy Policy Network for the 21st Century

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Foreword

Investors Continue to Create the Climate *for* Change

The numbers from the 2008 Global Trends in Sustainable Energy Investment Report are impressive and continue to break new records in the evolving clean energy sector – nearly $150 billion of new money in 2007. The message these numbers present is clear: sustainable energy is now a mainstream *and* accelerating investment sector.

This edition of Global Trends shows that investment flows have not only continued to grow – more than 60% compared to 2006 – they have broadened and diversified, giving the sustainable energy sector greater breadth, depth and scale. The only sector that has taken a downturn is biofuels amid rising concerns of feedstock availability, price and environmental sustainability.

The record overall investment, however, comes despite the recent 'credit crunch' and is a true cause for hope that rising concerns over climate change and energy prices are leading to a fundamental change in the way we produce and use energy. These figures show that the finance sector's forward view may be better at seeing the "disruptive change" of new technology.

Indeed, energy analysts that look backward see that renewable energy "only" supplies 5% of global energy. Renewable energy, however, accounted for 9.4% of global energy investment and for 23% of new electricity generating capacity in 2007. Investment levels are on track to reach $450 billion a year by 2012 and $600 billion a year in 2020.

In terms of climate change, the numbers in Global Trends point to the most cost-effective solutions if carbon emissions are to be reduced in time to avoid the most dangerous climate change scenarios. The twin thrusts from renewable energy and improved energy efficiency can be the sustainable energy engine of a global economy without dangerous carbon emissions.

Rather than waiting for new technology to clean up the current energy infrastructure, the job can be done now from existing solar, wind, geothermal and other currently commercial technologies. Investment flows into sustainable energy have recently increased by more than $100 billion. This is a positive signal that the investment sector will be able to raise the $200-210 billion per year the UNFCCC Secretariat says is needed to return global GHG emissions to current levels.

Global Trends comes at a crucial time for international climate diplomacy with less than 17 months to go to the pivotal Copenhagen meeting of the climate convention. Here governments must reach agreement on a new and decisive climate agreement.

The message from the report is one of confidence--confidence that deep and meaningful emissions reductions are achievable and if the clean energy markets are given the oxygen to evolve.

Renewable energy and energy efficiency really are the light at the end of the climate tunnel that illuminates the most cost-effective and timely ways to reduce carbon emissions across the global economy. The challenge now is to accelerate efforts to develop the policies and signals that will continue to create the climate *for* change.

Achim Steiner
Executive Director
United Nations Environment Programme

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All figures in this report, unless otherwise credited, are based on the output of the New Energy Finance Desktop – an online portal to the world's most comprehensive database of investors 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 20,000 organisations (including start-ups, corporates, venture capital and private equity providers, banks and other investors), 10,400 projects and 9,400 transactions.

Methodology

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. Since last year's report – Global Trends in Sustainable Energy Investment 2007 – investment totals for 2006 have been restated upwards, with total new investment of $92.6 billion (up from $70.9 billion). The total new investment in 2007 is $148.4 billion.

The following sustainable energy projects are included in New Energy Finance's Desktop database: 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, all biofuels projects with a capacity of 1 million litres or more per year, and all energy efficiency projects that involve financial investors.

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 data used is historic figures, showing confirmed / disclosed investment. This report covers these project transactions, as well as estimations of investment in small scale technology deployment such as domestic solar systems and solar water heaters.

This methodology also means that New Energy Finance's investment numbers may vary from other sources, notably the 2007 Renewables Global Status Report, released by REN21 earlier in 2008.[i] REN21 uses a top-down methodology, taking MW installed in a particular year and applying a $/MW installation cost to estimate investment in that year's new installed capacity. Given the industry's rapid growth, REN21's numbers are likely to be slightly lower than New Energy Finance's numbers, as they effectively reflect capex of installed capacity in a particular year, while New Energy Finance's numbers will include some investment earmarked for future years. Another fundamental difference is that New Energy Finance includes investment in biofuels in its figures. New Energy Finance's revised 2006 total of $63 billon of asset finance for new projects (including small projects) includes biofuels investment of $14 billion. New Energy Finance's total asset finance figure of $103.5 billion for 2007 includes $17 billion invested in biofuels projects.

Definitions

New Energy Finance tracks deals across the financing continuum, from R&D funding and venture capital for technology and early-stage companies through to public market financing for projects and mature companies and asset financing for capacity projects. Investment categories are defined as follows:

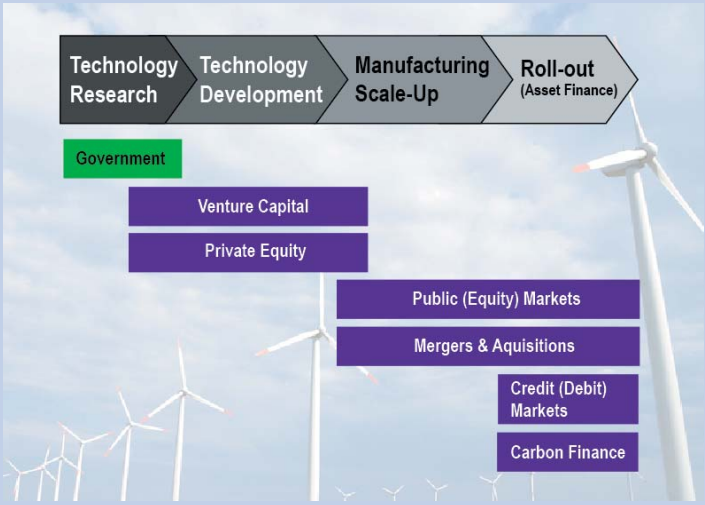
Venture Capital and Private Equity (VC/PE): all money invested by venture capital and private equity funds as equity in the companies developing renewable energy technology. Similar investment in companies setting up generating capacity through Special Purpose Vehicles is counted in the asset financing figure.

Public markets: all money invested in the equity of publicly quoted companies developing renewable energy technology and low-carbon power generation. Investment in companies setting up generating capacity is included in the asset financing figure.

Asset financing: all money invested in renewable energy generation projects, whether from internal company balance sheets, from debt finance, or from equity finance. It excludes refinancings and short-term construction loans.

Mergers and acquisitions: the value of existing equity purchased by new corporate buyers in companies developing renewable technology or operating renewable energy projects.

The Sustainable Energy Financing Continuum



Source: SEFI, New Energy Finance

To make it clear which point in the financing continuum each of the investment sections refers to, we have included a small version of this diagram within each of the relevant sections, with the appropriate financing stage highlighted. So, for example, venture capital and private equity – which is mainly for technology development and expansion - would be illustrated as: