

Global investments in green energy up nearly a third to \$211 billion

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Wind farms in China and small-scale solar panels on rooftops in Europe were largely responsible for last year's 32% rise in green energy investments worldwide according to the latest annual report on renewable energy investment trends issued by the UN Environment Programme (UNEP).

Last year, investors pumped a record \$211 billion into renewables -- about one-third more than the \$160 billion invested in 2009, and a 540% rise since 2004.

For the first time, developing economies overtook developed ones in terms of "financial new investment" -- spending on utility-scale [renewable energy](#) projects and provision of equity capital for renewable energy companies.

On this measure, \$72 billion was invested in [developing countries](#) vs. \$70 billion in developed economies, which contrasts with 2004, when financial new investments in developing countries were about one quarter of those in [developed countries](#).

The report, [Global Trends](#) in Renewable [Energy Investment](#) 2011, has been prepared for UNEP by London-based Bloomberg New Energy Finance.

It was launched today by UN Under-Secretary-General and UNEP Executive Director Achim Steiner and Udo Steffens, President and CEO

of the Frankfurt School of Finance & Management as it was also announced that a new UNEP Collaborating Centre for Climate & Sustainable Energy Finance is being inaugurated at the Frankfurt School.

China, with \$48.9 billion in financial new investment in renewables (up 28%), was the world leader in 2010. However, other parts of the emerging world also showed strong growth:

South and Central America: up 39% to \$13.1 billion;

Middle East and Africa: up 104% to \$5 billion;

India: up 25% to \$3.8 billion, and

Asian developing countries excluding China and India: up 31% to \$4 billion.

Another positive development, highlighted in the report with implications for long-term clean energy developments, was government research and development. That category of investment climbed over 120 per cent to well over \$5 billion.

Mr. Steiner said: "The continuing growth in this core segment of the Green Economy is not happening by chance. The combination of government target-setting, policy support and stimulus funds is underpinning the renewable industry's rise and bringing the much needed transformation of our global energy system within reach."

"The UN climate convention meeting in Durban later in the year, followed by the Rio+20 summit in Brazil in 2012, offer key opportunities to accelerate and scale-up this positive transition to a low carbon, resource efficient Green Economy in the context of sustainable development and poverty eradication," he added.

"The finance industry is still recovering from the recent financial crisis," adds Udo Steffens, President of the Frankfurt School of Finance and

Management. "The fact that the industry remains heavily committed to renewables demonstrates its strong belief in the prospects of sustainable energy investments. "

"The investment activity in the developing world is not only leading to innovations in renewable energy technologies. Further more, it will open up new markets as first mover investors are facilitating a range of new business models and support entrepreneurship in the developing world", explains Udo Steffens.

The report points out that not all areas enjoyed positive growth in 2010: there was a decline of 22% to \$35.2 billion in new financial investment in large-scale renewable energy in Europe in 2010. But this was more than made up for by a surge in small-scale project installation, predominantly rooftop solar.

Michael Liebreich, chief executive of Bloomberg New Energy Finance, said: "Europe's small-scale solar energy boom owed much to feed-in tariffs, particularly in Germany, combined with a sharp fall in the cost of photovoltaic (PV) modules."

Investments in Germany in "small distributed capacity" rose 132% to \$34 billion, in Italy they rose 59% to \$5.5 billion, France up 150% to \$2.7 billion, and the Czech Republic up 163% to \$2.3 billion.

The price of PV modules per megawatt has fallen 60% since mid-2008, making solar power far more competitive in a number of sunny countries.

By the end of 2010, many countries were rushing to make their PV tariffs less generous. Indeed, Spain and the Czech Republic both moving to make retroactive cuts in feed-in tariff levels for already-operating projects "damaged investor confidence," the report says. "Other

governments, such as those of Germany and Italy, announced reductions in tariffs for new projects - logical steps to reflect sharp falls in technology costs."

Nevertheless the small-scale solar market is likely to stay strong in 2011, the report suggests.

Further drops in costs for solar, wind and other technologies lie ahead, the report says, posing a growing threat to the dominance of fossil-fuel generation sources in the next few years.

Throughout the last decade, wind was the most mature renewable energy technology and enjoyed an apparently unassailable lead over its rival power sources.

Wind turbine prices have fallen 18% per megawatt in the last two years, reflecting, as with solar, fierce competition in the supply chain.

In 2010, wind continued to dominate in terms of financial new investment in large scale renewables, with \$94.7 billion (up 30% from 2009). However, when investments in small scale projects are added in solar is catching up, with \$86 billion in 2010, up 52% on the previous year. With \$11 billion invested, biomass and waste-to-energy come in third in front of biofuels, which boomed at \$20.4 billion in 2006, but fell off dramatically -- to \$5.5 billion last year.

The sharpest percentage jumps in overall investment were seen in small-scale projects -- up 91% year-on-year at \$60 billion, and in government-funded research and development, up 121% at \$5.3 billion, as more of the "green stimulus" funds promised after the financial crisis arrived in the sector.

Two areas of investment showed a fall in 2010 compared to 2009:

corporate research, development and deployment (down 12% at \$3.3 billion, as companies retrenched in the face of economic hard times) and provision of expansion capital for renewable energy companies by private equity funds (down 1% to \$3.1 billion).

Clean energy share prices fell in 2010, with the WilderHill New Energy Global Innovation Index (NEX) down 14.6%, under-performing wider stock market indices by more than 20%. This showing reflected investor concerns about industry over-capacity, cutbacks in subsidy programs and competition from power stations burning cheap natural gas.

Acquisition activity in renewable energy, representing money changing hands rather than new investment, fell from \$66 billion in 2009 to \$58 billion in 2010. The two largest categories of M&A – corporate takeovers and acquisitions of [wind farms](#) and other assets – both fell by around 10%.

The low price of natural gas—which was between \$3 and \$5 per million BTU for almost all of 2010-- hurt the growth of [renewables](#), the report says. The price of natural gas was far less than it was in much of the mid-2000s, before it peaked at \$13 in 2008.

"This gave generators in the US, but also in Europe and elsewhere, an incentive to build more gas-fired power stations and depressed the terms of power purchasing agreements available to renewable energy projects," says the report.

Frankfurt School of Finance & Management and UNEP launch new Collaborating Centre

The report launch marks the beginning of the new UNEP Collaborating Centre for Climate & Sustainable Energy Finance at the Frankfurt School of Finance & Management. Its goal is to develop cost-effective

ways to reduce energy-related carbon emissions by mobilizing sustainable energy investments and strengthening their associated markets.

This is achieved by working with financial institutions to develop technical know-how, innovative financing approaches and new forms of entrepreneurial and end-user finance.

The Centre's approach combines project implementation on the ground with research, think tank activities, training and education.

One of Europe's leading business schools, the Frankfurt School also builds and strengthens financial sector capacities in emerging markets and developing countries through consulting and training projects. Through its "Sustainable Energy Finance" centre, the Frankfurt School has implemented energy efficiency and renewable energy projects worldwide.

"At the Frankfurt School we look back on profound experience with international advisory in all fields of development finance," says the school's President and CEO Udo Steffens. "The UNEP Collaborating Centre allows us to apply this expertise and knowledge to climate and sustainable [energy](#) finance, covering research, advisory and education."

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