



Embargo: 09:00 EDT (13:00 GMT, 15:00 CET), Tuesday March 31st, 2015

UNEP's 9th annual '**Global Trends in Renewable Energy Investment**' report, prepared by Frankfurt School – UNEP Centre and Bloomberg New Energy Finance, will be launched via media teleconference **09:00 EDT (13:00 GMT, 15:00 CET), Tuesday March 31st, 2015**.

Please dial +41 22 917 0900, PIN 44174.

Experts are also available for individual **interviews**.

The report in full is available **for media preview** at <http://bit.ly/1Bnu9cB>

It will be **publicly available** from 13:00 GMT March 31 at <http://fs-unep-centre.org>

Renewables Re-energized: Green Energy Investments Worldwide Surge 17% to \$270 Billion in 2014

***Driven by solar and wind, world investments reverse 2-year dip,
brush aside challenge from sharply lower oil price;
103 gigawatt (GW) capacity added in 2014 is roughly that of all US nuclear plants***

Frankfurt / Nairobi, 31 March 2015 — Global investments in renewable energy rebounded strongly last year, registering a solid 17% increase to \$270 Billion in 2014 after two years of declines and brushing aside the challenge from sharply lower crude oil prices. According to UNEP's 9th annual *Global Trends in Renewable Energy Investment 2015*, prepared by the Frankfurt School – UNEP collaborating Centre for Climate and Sustainable Energy Finance (the Centre) and Bloomberg New Energy Finance (BNEF) the main cause were major expansions of solar installations in China and Japan and record investments in offshore wind projects.

A continuing sharp decline in technology costs – particularly in solar but also in wind – means that every dollar invested in renewable energy bought significantly more generating capacity in 2014. The 103GW of capacity added by new renewable energy sources last year compares to 86GW in 2013, 89GW in 2012 and 81GW in 2011 and made 2014 the best year ever for newly installed capacity.

Wind, solar, biomass and waste-to-power, geothermal, small hydro and marine power contributed to an estimated 9.1% of world electricity generation in 2014, up from 8.5% in 2013. This meant that last year the world electricity system emitted 1.3 gigatonnes of CO₂ – roughly twice the emissions of the world's airline industry – less than it would have if that 9.1% had been produced by the same fossil-dominated mix generating the other 90.9% of world power.

"Once again in 2014, renewables made up nearly half of the net power capacity added worldwide" says Achim Steiner, UN Under-Secretary-General and Executive Director of UNEP. "These climate-friendly energy technologies are now an indispensable component of the global energy mix and their importance will only

increase as markets mature, technology prices continue to fall and the need to rein in carbon emissions becomes ever more urgent.”

China saw by far the biggest renewable energy investments last year — a record \$83.3 billion, up 39% from 2013. The US was second at \$38.3 billion, up 7% on the year though this is below its all-time high reached in 2011. Third came Japan, at \$35.7 billion, 10% higher than in 2013 and its biggest total ever.

As in previous years, the market in 2014 was dominated by record investments in solar and wind, which accounted for 92% of overall investment in renewable power and fuels. Investment in solar jumped 25% to \$149.6 billion, the second highest figure ever, while wind investment increased by 11% to a record \$99.5 billion. In 2014, some 49GW of wind capacity and 46GW of solar PV were added worldwide, both records. The dominant feature of the solar sector was an unprecedented expansion in China and Asia who invested \$74.9 billion in solar in 2014, around half the world’s total. A boom in European offshore wind development resulted in seven \$1 billion-plus projects reaching “final investment decision” stage in 2014. Among these the \$3.8 billion 600MW Gemini installation off the coast of the Netherlands was the largest non-hydro renewable energy plant to get the go-ahead anywhere in the world. Other renewable energy sources did not perform so well by comparison. Biofuels fell 8% to \$5.1 billion, biomass and waste-to-energy dropped 10% to \$8.4 billion and small hydro was down 17% to \$4.5 billion. Only geothermal bucked the trend with a 23% increase to \$2.7 billion.

A salient feature of the 2014 result was the rapid expansion of renewables into new markets in developing countries, where investments jumped 36% to \$131.3 billion. China with \$83.3 billion, Brazil (\$7.6 billion), India (\$7.4 billion) and South Africa (\$5.5 billion) were all in the top 10 investing countries, while more than \$1 billion was invested in Indonesia, Chile, Mexico, Kenya and Turkey.

Despite turnaround, challenges remain

Although 2014 was a turnaround year for renewables after two years of shrinkage, multiple challenges remain in the form of policy uncertainty, structural issues in the electricity system — even in the very nature of wind and solar generation, with their dependence on breeze and sunlight.

Another challenge was, at first sight, the impact of the 50%-plus collapse in the oil price in the second half of last year. According to Udo Steffens, President of the Frankfurt School of Finance & Management, however, the oil price is only likely to dampen investor confidence in parts of the sector, such as solar in oil-exporting countries, and biofuels in most parts of the world. “Oil and renewables do not directly compete for power investment dollars,” said Steffens. “Wind and solar sectors should be able to carry on flourishing, particularly if they continue to cut costs per MWh. Their long-term story is just more convincing.”

Of greater concern is the erosion of investor confidence caused by increasing uncertainty surrounding government support policies for renewables. “Europe was the first mover in clean energy, but it is still in a process of restructuring those early support mechanisms,” notes Michael Liebreich, Chairman of the Advisory Board for Bloomberg New Energy Finance. “In the UK and Germany we are seeing a move away from feed-in tariffs and green certificates, towards reverse auctions and subsidy caps, aimed at capping the cost of the transition to consumers.” Southern Europe is still almost a no-go area for investors because of retro-active policy changes, most recently those affecting solar farms in Italy. In the US there is uncertainty over

the future of the US Production Tax Credit for wind, but costs are now so low that the sector is more insulated than in the past. Meanwhile the rooftop solar sector is becoming unstoppable."

There are also structural challenges in the electricity system as grids and utilities in many countries struggle to cope with the increasing penetration of wind and solar in the generation mix. Coping with 25% or more variable generation is more difficult for grids and utilities than managing a 5% proportion.

Governments have often struggled to produce policy measures that keep up with the advance of renewable power and its knock-on effect on the rest of the electricity system.

2014 was a year of eye-catching steps forward for renewable energy with investment rallying strongly. If these positive investment trends are to continue it is increasingly clear that major electricity market reforms will be needed of the sort that Germany is now attempting with its Energiewende energy transition. The structural challenges needing to be overcome are not simple ones, but are of the sort that have only arisen because of the very success of renewables and their over two trillion dollars of investment mobilized since 2004.

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Contacts:

* Dr. Elisa Antz, Press Officer, Frankfurt School of Finance & Management, Tel: +49(0)69-154008-566, mobile: +49 (0) 172 62 14 147; e. antz@fs.de

* Shereen Zorba, Head, UNEP News Desk; +254-20-762-5022; +254-788-526000 (m); +254-713601259; shereen.zorba@unep.org

* Terry Collins, Tel: +1-416-538-8712; Mobile: +1-416-878-8712, tc@tca.tc