KEY FINDINGS

- Total investment in renewable power and fuels (excluding large hydro-electric projects) fell for the second year running in 2013, reaching $214 billion worldwide, some 14% lower than in 2012 and 23% below the 2011 record. The decline reflected a sharp fall in solar system prices, and the effect of policy uncertainty in many countries. The latter issue also depressed investment in fossil fuel generation in 2013.

- If the drop in investment was a cloud, it had several silver linings. One was the sharply reduced cost of solar photovoltaic systems, which meant that a record amount of PV capacity (some 39GW) was constructed in 2013, and for less money than the smaller 2012 total of 31GW. A second silver lining was that 2013 brought a 54% recovery in clean energy share prices, stimulating equity raising by specialist companies on the public markets.

- A third was that in 2013 cost reductions and efficiency improvements enabled onshore wind and PV projects to be built in a growing number of locations around the world without subsidy support. Wind and PV may be able to out-compete fossil-fuel options as long as there are plentiful local sunshine or wind resources, low capital costs, and no cheap, indigenous coal or gas feedstocks.

- A fourth was that, renewable energy excluding large hydro made up 43.6% of the new power capacity added in all technologies in 2013 (the same figure as in the previous year), and raised its share of total generation worldwide to 8.5% from 7.8%. Global energy-related CO2 emissions would have been some 1.2 billion tonnes higher but for this contribution.

- Investment in wind was relatively resilient in 2013, falling just 1% to $80 billion, while that in solar tumbled 20% to $114 billion. Biofuels saw a 26% drop in investment to $5 billion, the lowest for nine years, while biomass and waste-to-energy fell 28% to $8 billion, and small hydro-electric (projects of less than 50MW) declined 16% to $5 billion. Geothermal was the only riser, investment in it gaining 38% to $2.5 billion.

- 2013 also saw an interruption to the previously rising trend of renewable energy investment in developing economies as a whole. After eight years of increases, this fell 14% last year to $93 billion. Investment in developed economies also retreated 14%, to $122 billion.

- Last year was the first ever that China invested more in renewable energy than the whole of Europe. The Chinese total, although down 6% to $56 billion, finished well ahead of Europe's shrunken $48 billion, down 44%. The US saw a fall of 10% to $36 billion, while India moved 15% down to $6 billion, and Brazil 54% down to $3 billion, the lowest since 2005.

- The only regions gaining ground in 2013 were the Americas excluding the US and Brazil, with a 26% increase to $12 billion, helped by positive trends in several Hispanic countries and in Canada, and Asia-Oceania excluding China and India, with a 47% rise to $43 billion. Japan was the biggest contributor to the latter move, as its solar boom helped to drive an 80% increase in renewable energy investment to $29 billion (excluding R&D).

- Among the different types of investment, asset finance of utility-scale wind farms, solar parks and other new installations fell 13% to $133 billion, while outlays on small-scale projects such as rooftop solar lurched downwards 25% to $60 billion – mostly due to the decline in PV system costs.

- Venture capital and private equity investment in specialist renewable energy companies slumped 46% to $2 billion, the lowest figure since 2005, as funds took a cautious view of young high-technology enterprises and of the chances of securing a profitable exit. Government research and development spending on renewables rose 3% to $5 billion, while corporate R&D was 6% lower at $5 billion.

- The star performer among investment types was public market equity raising by renewable energy companies. This jumped 201% to $11 billion, the highest since 2010, spurred on by the rally in clean energy share prices and by institutional investors' increased appetite for funds offering solid yields on portfolios of operating projects.

- Large hydro-electric projects, of more than 50MW, were another important area of renewable energy activity, albeit outside the main scope of the statistics in this report. At least 20GW of capacity are estimated to have come on stream in 2013, equivalent to approximately $35 billion of investment.

- Although investment in renewable energy capacity including all hydro in 2013 was once again below gross investment in fossil-fuel power, at $227 billion compared to $270 billion, it was roughly double the net figure for investment in fossil-fuel power excluding replacement plant.