



Press release  
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## Clean energy sector attracts \$295 billion of investments in 2016

- New clean energy investment slides 14% to \$295 billion
- UK responsible for top five global project finance deals at \$16.6 billion
- Green bond issuances total \$95.4 billion for another record year

**London, 18<sup>th</sup> January, 2017.** Clean Energy Pipeline, the online financial news and data service dedicated to the clean energy sector, today releases its preliminary analysis of venture capital, private equity, project finance, mergers and acquisitions, public markets and green bonds activity during Q4.16 and 2016.

The global clean energy industry attracted \$294.5 billion of new investment in 2016, a 14% decrease on the record-breaking 2015 levels.

Investments were down across all clean energy technologies in 2016. Wind and solar investments respectively fell to \$128.5 billion [-10.4%] and \$124.1 billion [-17.3%] in the year, while biomass [-4.5] and all other clean energy technologies [-21%], including energy storage, energy efficiency, and biofuels, saw a similar downturn in fortunes.

“Despite the overall drop in green investments, developers and investors will no doubt be buoyed by the amount of capital that is pouring into the renewable energy sector, relative to the conventional power mix,” commented Andrew Nguyen, news editor at Clean Energy Pipeline.

“In 2017, policy changes and the increasing usage of the competitive auction model will again dictate the movement of clean energy financing and development across the globe.”

By geography, Asia Pacific was the largest clean energy investment market last year at \$107.6 billion, followed by Europe at \$85.5 billion, North America at \$66 billion, Latin & Central America at \$21.4 billion and Africa & the Middle East at \$14.2 billion.

### Project finance down across all regions

Clean energy project finance totalled \$189.7 billion in 2016, a 21.5% decrease on the \$241.8 billion invested in the previous year.

Project finance totalled \$51.9 billion in Q4.16, again falling just over 20% from the previous year’s corresponding quarter. In fact, project finance investments was down across all geographies.

When compared with 2015, Europe saw \$9.7 billion fewer investments. Asia Pacific was no different after a drop of \$9.3 billion in project finance investments, with Africa & the Middle East [-\$6.29 billion], and Latin & Central America [-\$3.68 billion] also taking a hit in the amount invested.



However, North America took the biggest hit at \$23 billion fewer investments, with 2016 being the slowest year on record for clean energy project financing post-2008.

The four largest project finance deals last year all came in the UK's offshore wind sector and were worth a combined \$14.4 billion of investments. The quintet of offshore wind projects to reach financial close last year comprised DONG Energy's 1.2 GW Hornsea Phase 1 project, SSE's 558 MW Beatrice offshore wind project, Scottish Power Renewables' 714 MW East Anglia 1 development, and Statkraft, Statoil and Masdar's 402 MW Dudgeon offshore project.

### **Green M&A worth \$87 billion**

Total clean energy M&A activity across the entire sector, including acquisitions of projects and companies in the supply chain, was worth a combined \$87.3 billion. Contrary to the last year's clean energy trend of declining investments, the amount marked a 9.3% uptick from the \$79.8 billion invested in 2015.

On the project acquisition side, 66.8 GW of renewable energy capacity was purchased in 2016, a close to 30% decrease from the 94.1 GW acquired in 2015. From the amount, 29.6 GW of renewables capacity was operational, with 10.9 GW under construction and 24.5 GW in the pre-construction stage.

Clean energy M&A investments in Q4.16 totalled \$21.6 billion. Notable deals in the quarter included Macquarie Group's 50% stake acquisition of the 580 MW Race Bank offshore wind farm worth over \$2 billion, General Electric's \$1.7 billion buyout of Danish wind turbine firm LM Wind Power Group, and Duke Energy's divestment of its Latin American power business for over \$2.5 billion.

### **VC/PE rallies by 40%**

Venture capital and private equity investment in clean energy (excluding buyouts) rebounded to \$9.4 billion [+40%] in 2016, compared with the \$6.6 billion of 2015. Moreover, the \$2 billion invested in Q4.16 was the strongest end-of-year quarter in five years [2011: \$2.5 billion].

Total VC/PE investments were substantially boosted by increased activities across the top four market leaders: US [\$3.6 billion +11.4%], China [\$3.1 billion +388%], Germany [\$893 million +337%] and the UK [\$465 million +98%].

Wind companies saw a substantial uptick in VC/PE financing at \$1.5 billion in 2016, compared with \$546 million in 2015. Solar companies attracted approximately \$1.8 billion in the year, a nominal change from the \$1.9 billion of 2015, while energy efficiency companies took in \$1.3 billion.

However, green transportation companies attracted a record c.\$3 billion of VC/PE investments in 2016, a 191% increase from the \$1 billion invested into the sector in 2015.

### **Uncertainty deflates public markets**

Clean energy companies raised \$14.9 billion in 2016, retracting 7.4% from the \$16.1 billion secured in 2015. The sway of market volatility on companies across Europe and North America resulted in the poorest public markets performance since 2013.

A total of 26 initial public offerings and 44 secondary note offerings were launched last year, boasting respective capital raises \$8 billion and \$7 billion.



The largest IPO's of 2016 came via DONG Energy's \$3.3 billion floatation on the OMX Nordic Stock Exchange and RWE innogy's \$2.24 billion IPO on the Frankfurt Stock Exchange. Tesla Motors Inc. recorded the largest secondary note offering on Nasdaq Global Select Market, where it raised \$1.4 billion.

### **Green bonds hit new heights**

The global green bond market once again broke its annual record for investments at \$95.4 billion from 240 issuers. The amount far surpassed 2015's amount of \$48.9 billion, at the time a record year for the financial instrument, by a staggering 95%.

Investment/commercial banks were perhaps the prime mover for the surge in green bonds, having issued \$31.4 billion in 2016, compared with the \$8 billion issued in 2015. Government/municipal green bond issuances also shot up by 111% to \$17.2 billion. Projects bonds saw the only decrease from \$6.8 billion in 2015 to \$2.4 billion in 2016.

Issuances from China were accountable for the top seven largest green bonds in 2016, far outstripping the value of European green bonds. Shanghai-based Bank of Communications Co. Ltd. issued the largest green bond last year at \$4.4 billion.

Please visit <http://public.cleanenergypipeline.com/data/quarterly-statistics> to download the statistics package on which this data is based.

For further information on this press release or to receive a copy of the data on which this press release is based, please contact:

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### About Clean Energy Pipeline

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