GLOBAL INVESTMENT

Capital spend on energy security and sustainability falls short

Global energy investment stabilised in 2018, but security and sustainability concerns are growing, according to the latest International Energy Agency *World Energy Investment* report.

Last year, global energy investment stabilised, ending three consecutive years of decline. Capital spending on oil, gas and coal bounced back, while investment for energy efficiency and renewables stalled, according to the latest review by the International Energy Agency (IEA).

Speaking at the recent joint World Petroleum Council and Energy Institute conference on the theme 'Financing challenges for a transforming energy industry', in London, Alessandro Blasi, Special Advisor to the Executive Director of the IEA, told delegates: 'There is a growing mismatch between current trends and the paths targeted to meet the Paris Agreement and other sustainability goals.'

Global energy investment totalled over $1.8tn, a level similar to 2017. For the third year in a row, the power sector attracted more investment than the oil and gas industry. A rise in fossil fuel supply investment offset lower power and stable efficiency spend. The biggest jump in overall energy investment was in the US, where it was boosted by high spend in upstream supply, particularly shale, but also electricity networks. The increase narrowed the gap between the US and China, which remained the world's largest investment destination.

Blasi emphasised that: 'Today's capital allocation would need to shift rapidly towards cleaner sources and electricity networks in order to align with the IEA's Sustainable Development Scenario (SDS) and the Paris Agreement.'

Moreover, even as investments stabilised, approvals for new conventional oil and gas projects fell short of what would be needed to meet continued robust growth in global energy demand. He maintained: 'There are few signs of the substantial reallocation of capital towards energy efficiency and cleaner supply sources that are needed to bring investments in line with the Paris Agreement and SDS goals.'

Decisions to sanction new oil and gas projects have picked up slightly, said Blasi. 'But they still remain short of what would be required if demand continues to grow strongly.' Conventional crude oil resources sanctioned in 2018 globally totalled about 8bn boe compared to about 22bn boe in 2012 – marking a significant decline.

Generally, fossil fuel generation investment is down, but the global fleet is still growing. Investment decisions for new fossil fuel generation are down for the fourth consecutive year, with significant reduction in coal powered generation in China and increased investment in this area in India, and increased gas power in the US and MENA region.

According to a statement by Dr Fatih Birol, Executive Director, IEA, on the release of the report: 'Energy

Photo: IEA

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Dr Fatih Birol, Executive Director, IEA

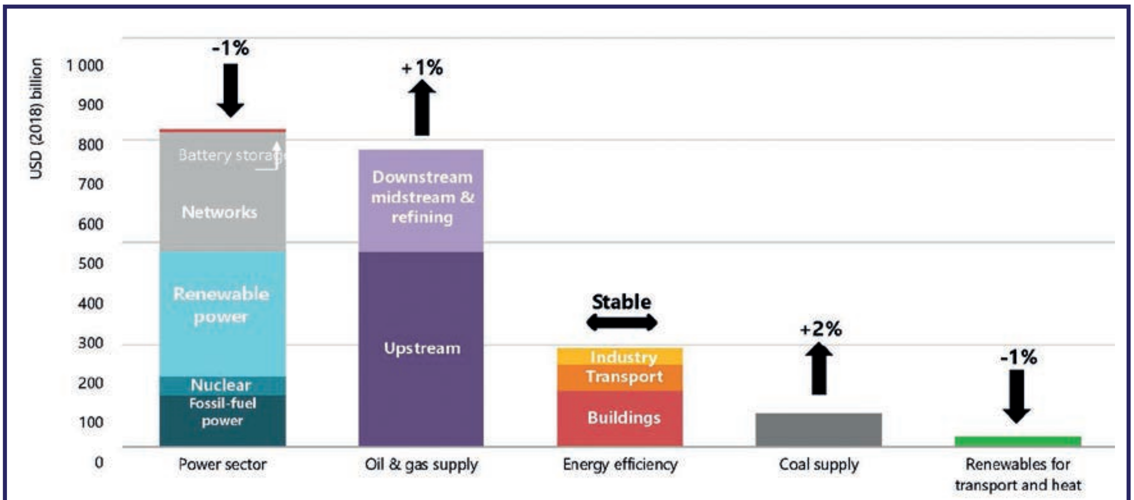

Figure 1: Global energy investment in 2018, compared to 2017 – global energy investment stabilised in 2018 after three years of decline
Source: IEA 2019

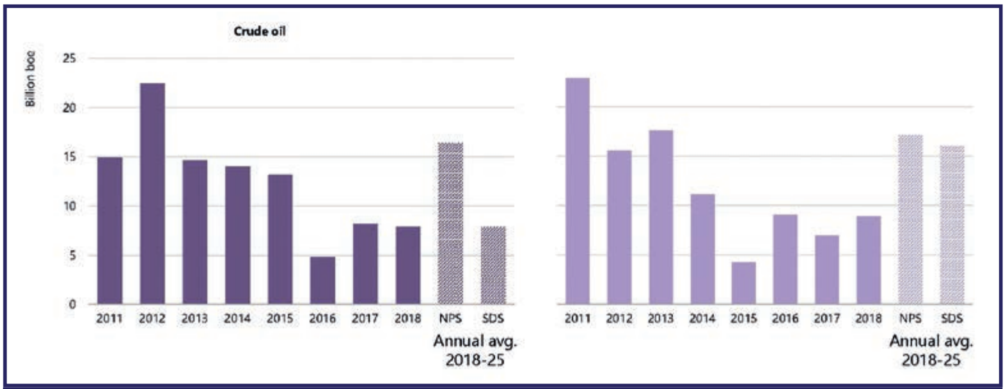

Figure 2: Crude oil and gas conventional resources sanctioned *Source: IEA 2019*

investments now face unprecedented uncertainties, with shifts in markets, policies and technologies. But the world is not investing enough in traditional elements of supply to maintain today's consumption patterns, nor is it investing enough in cleaner energy technologies to change course. Whichever way you look, we are storing up risks for the future.'

Furthermore, low carbon investment is not keeping pace with power demand. According to IEA findings, the output expected from investment in renewable and nuclear power levelled off in 2018, while demand growth soared. 'To meet sustainability goals, spending on renewable power would need to double,' said Blasi.

Project finance for renewable power had increased one quarter in the past five years, as government policies enable access to financing and help manage risks in many parts of the world. Total global power investment was estimated to be $775bn in 2018.

The US shale industry, after years of showing significant improvements in the financial sustainability of operations, did not turn a profit in 2018. But the IEA anticipates that 2019 could be more positive.

Investment shift

Blasi remarked that the world is witnessing a shift in investments towards energy supply projects that have shorter lead times. In power generation, and upstream oil and gas projects, the industry is bringing capacity to market 20% faster than at the start of the decade. 'In a changing energy system, industry and investors are seeking to better manage capital at risk, as well as improving project management with lower costs for shorter-cycle assets such as solar PV, onshore wind and US shale,' he noted.

Though decisions to invest in coal-fired plants declined to their lowest level this century and retirement rose, the global coal power fleet continued to expand, particularly in developing Asian countries.

The continuing investments in coal plants, which have a long lifecycle, appear to be aimed at filling a growing gap between soaring demand from power and a levelling off of expected generation from low carbon investments (renewable and nuclear). Without carbon capture technology or incentives for earlier retirements, the IEA predicted that coal power and the high CO_2 emissions it produces would remain part of the global energy system for many years to come. At the same time, to meet sustainability goals, investment in energy efficiency would need to accelerate while spending on renewable power is expected to double by 2030.

Among major countries and regions, India had the second largest jump in energy investment in 2018 after the US. However, the poorest regions of the world, such as sub-Saharan Africa, face persistent financing risks. They only received around 15% of investment in 2018, even though they account for 40% of the global population. The IEA report insists that far more capital needs to flow to the least developed countries in order to meet sustainable development goals.

The report also found that spending on research, development and demonstration (RD&D) by national governments fell far short of what is needed. While public energy RD&D spending rose modestly in 2018, led by the US and China, its share of gross domestic product (GDP) remained flat and most countries have not increased RD&D spending as a percentage of GDP.

In closing, Blasi said 'current investment trends show that bolder decisions are required to make the energy system more sustainable.'

Company strategies are reacting to technological change and unprecedented uncertainties by focusing on projects that deliver returns more quickly.

Approvals of new and conventional oil and gas projects are falling short of what would be needed to meet continued robust demand growth.

There is also concern that there are few signs of a major shift of capital towards efficiency, renewable and innovative technologies that are needed to turn emissions around.

Blasi noted that: 'Investment and financing decisions are shaped by policies. However, today's frameworks are not yet fit to avoid multiple risks for the future.'

As Dr Birol said on publication of the report: 'Government leadership is critical to reduce risks for investors in the emerging sectors that urgently need more capital to get the world on the right track.' ●

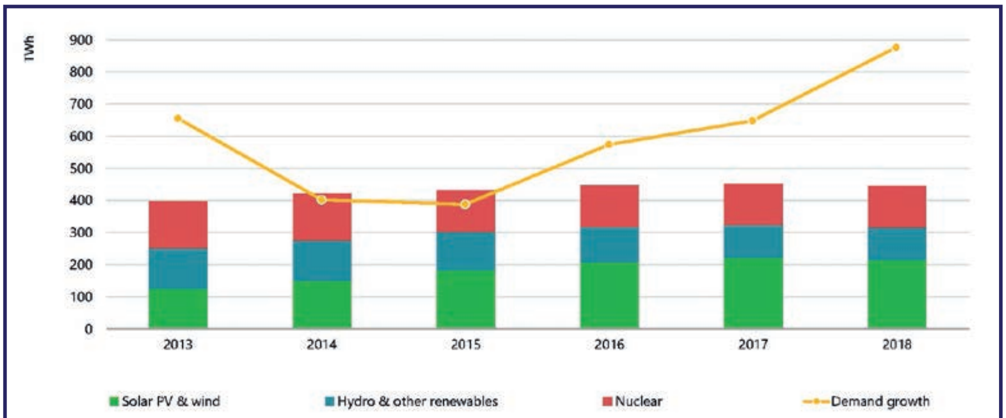

Figure 3: Expected generation from low-carbon power investments *Source: IEA 2019*