Global energy investment fell 12% in 2016, a second consecutive year of decline.

Total energy investment was $1.7 trillion in 2016. Electricity sector investment overtook oil and gas for the first time, while energy efficiency was the biggest growth sector.
China remains the first destination of energy investment in 2016

China represented 21% of global energy investment, supported by electricity supply and networks; despite a sharp decline in oil and gas, the US total share rose significantly.
Europe leads efficiency spending but China is set to overtake it by 2018

Policy continues to underpin efficiency spending, especially in buildings insulation, heating systems and home appliances. Much of the growth in transport efficiency spending is in electric vehicles.
A two-speed world oil market

After two years of unprecedented decline, global upstream investment is expected to stabilize in 2017, but downside risks remain.
Oil and gas projects moving to shorter timelines and smaller sizes

A shift in company strategies and technology developments leads to shorter project cycles across all the oil and gas industry.

Average size of conventional resources sanctioned and time-to-market

- **Onshore**
- **Deepwater offshore**
- **Other offshore**

<table>
<thead>
<tr>
<th>Time to market (years)</th>
<th>Average size of resources (Million barrels)</th>
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</tbody>
</table>

- **Global Average**
- **2010-2014**
- **2016-2017**
A wave of coal power investment is coming to a pause

In 2016, FIDs for coal power fell to the lowest level in nearly 15 years, hampered by competition from renewables and environmental challenges. Gas power FIDs exceeded those for coal by over 1.5 times.
Investment in clean power is not keeping pace with demand

Only two-thirds of power demand growth is met by FIDs for clean power, which has remained stable the past 5 years. Despite the success of solar PV and wind, other sources are needed to fill the gap.
We've tracked a steady $37 billion/year of clean energy and electricity networks R&D spending, with room for growth from the private sector. As a share of GDP, China now spends most on energy R&D.
Conclusions

- Investment fell by 12% in 2016, a second consecutive year of decline, and electricity sector investment overtook oil, gas and coal investments combined.

- An upswing of US shale investment is creating a two-speed oil market and triggering a rapid transformation of the oil and gas industry.

- Despite a decline in coal power investment, China remained the top destination for energy investment due to robust renewables, electricity networks and energy efficiency spending.

- The clean energy transition needs more R&D but energy R&D expenditures are stable; there is a lot of scope for increased spending on energy innovation by governments and, in particular, the private sector.

- Investment decisions today will leave their mark on energy infrastructure for decades to come; the IEA will continue to focus on investment as a cornerstone of a secure and sustainable energy system.