

## FALLING DEMAND IS THE ENERGY SECTOR'S NEXT CHALLENGE\*

The fall in UK electricity generation to its lowest level since 1994, as reported on the Carbon Brief website earlier this month, reflects a trend in the energy market that is too often ignored. The supply side of the energy business — what Opec produces each month and how much gas Russia exports to Europe — is only half the story. The changing pattern of demand is at least as important and poses a real challenge to companies and investors in a sector where returns are already constrained by competition and regulation.

The decline in consumption is not limited to the UK or to electricity. Over the past decade, both total energy demand and electricity use have fallen across the developed world. Since 2010 demand has declined in 18 of the 30 countries that are members of the International Energy Agency. There are several different reasons for the decline in consumption. Technical advances have improved the efficiency of products ranging from washing machines and fridges to computer servers have been underpinned by regulatory changes such as the introduction of LED lighting. Economies have deindustrialised to differing degrees, while in some countries a proportion of the fall has been caused by low economic growth.

Although analysts and policymakers frequently assert that electricity will lead the shift to a low-carbon economy, there is so far only limited evidence of a real change. Electricity has only marginally expanded its share of final energy consumption since 2000 despite the growth of computers, telecommunications and the proliferation of domestic appliances. A small number of electric cars and the rising use of electricity in other parts of the transport sector starting with the railways have not yet made a material difference. By 2017, electricity contributed less than 1 per cent of final energy consumption in the transport sector, according to the IEA.

For the moment, and for the foreseeable future, there are two distinct markets — one consisting of appliances and light industry where electricity is the natural source of energy and a larger market made up of the transport sector, heavier industry and the provision of heat. In the overall market, electricity provides only 19 per cent of the energy consumed — the rest comes from the burning of hydrocarbons — coal, oil and natural gas. In the emerging markets, electricity demand continues to grow to meet basic energy needs. In the developed world, the fall in electricity demand may be more than temporary. Electricity remains a very important source of energy supply but the industry faces restructuring to force out those who cannot make money. Those companies that remain need to strike a new deal with consumers that demonstrates why investment in new infrastructure and capacity is necessary and why prices must reflect underlying costs and give investors a reasonable rate of return.