Promises and premises

Investment in clean-energy technology is increasingly seen as a clear opportunity. Definitive plans would spur more concrete action.

In many ways, 2017 was a mixed year for the energy transition. Renewable energy investments remained high, with prices for solar and wind power falling to unexpectedly low values. They're now as cheap as or cheaper than fossil alternatives in some regions. Having promised to build the world's largest lithium-ion battery in South Australia in just 100 days, Tesla switched on the 100-MW behemoth ahead of schedule[1]. The company also unveiled its electric truck, which it hopes will help revolutionize freight. Orders have already been streaming in[2] and other manufacturers have entered the fray[3]. At the same time, President Trump's announcement that the USA would withdraw from the Paris Agreement signalled a change in direction for the nation — at least at the federal level — and a need for new international climate leadership[4]. Shortly afterwards, Energy Secretary Rick Perry asked the Federal Energy Regulatory Commission to consider a new ruling that would effectively subsidize coal and nuclear to provide grid stability. By the end of the year, preliminary analysis indicated that global CO_2 emissions had risen by around 2% in 2017 (ref. [5]).

Nonetheless, it's clear that momentum continues to build behind clean energy, particularly following COP23 in Bonn and the One Planet Summit in Paris at the end of the year. The EU revealed €9 billion for sustainable projects in Africa and EU Neighbourhood countries as part of its External Investment Plan. One third of this is aimed at sustainable cities, while another third is to target sustainable energy and connectivity. Opportunities for clean energy technologies and efficiency abound in both.

Meanwhile, the launch of the Powering Past Coal Alliance, spearheaded by the UK and Canada, has laid down a commitment to phasing out coal power. At the time of writing, 26 nations, 8 sub-national governments (including the states of California, Oregon and Washington in the US) and 24 organizations have signed up[6]. The Alliance hopes to expand to 50 members by COP24. The World Bank also introduced measures to help it mobilize financing for projects that support climate-related development[7]. At the same time, the World Bank will start reporting emissions data on its energy projects and will cease financing of upstream oil and gas activities after 2019.

Such moves will reduce fossil-fuel activities in many energy-poor parts of the world, with the aim of improving health and well-being while meeting future demand in a sustainable way. Still, natural gas is expected to play a significant role in the low-carbon future for many nations. In a bid to further cement that role, eight major extractives companies agreed to a set of guiding principles on curbing methane emissions[8]. The largest of these, ExxonMobil, has declared that it will start disclosing reports on the impacts of climate policies on its business[9]. This decision comes after a proposal from the New York state employee's retirement fund was voted through by investors.

Investor pressure such as this, including from other pension funds, is starting to show up across the oil and gas sectors[10]. The reality of a low-carbon future is introducing uncertainty into projections for oil demand, particularly between forecasts from groups such as the International Energy Agency and those of the oil and gas companies. As investment groups start to limit their exposure to carbon, or at least to think more carefully about climate-connected risk, companies are revisiting their strategies. Dong Energy has shifted its focus entirely from fossil fuels to wind, turning itself into the world's largest offshore wind company. Similarly, oil company Saudi Aramco is beginning to change, partly through investments in chemical processing, as Saudi Arabia looks towards the future. The decisions it makes will be critical as it prepares for its public valuation later in the year.

All these changes and announcements reinforce the direction of travel. Yet transitions are vector quantities, not scalar, and what perhaps matters most now is the speed with which we move. World leaders increasingly recognize opportunities that clean energy offers, such as combatting climate change, improving health and living standards, and creating jobs. British Prime Minister Theresa May even declared that there is "a clear moral imperative" for developed nations to help those in danger from climate change[11]. Yet the Power Past Coal Alliance commits no one to any timeline for coal phase-out, while potentially significant partners such as Germany remain absent from the signatories. Similarly, despite progress by many G20 nations in shifting their domestic energy system towards cleaner alternatives, recent analysis reveals that the picture remains very different for some of them when it comes to their overseas financing[12]. In the period 2013–2016, G20 nations provided at least US$38 billion of public support for coal projects, 89% of which came from China, Japan, Germany, Russia and South Korea. Renewables received US$25 billion. While the pattern is shifting, coal projects are still expected to receive greater G20 financing than renewables.

If our leaders are serious about tackling climate change and maximizing the benefits of clean energy technologies, their rhetoric needs to be replaced by more concrete action. Agreeing to phase out coal is a good start, but clear timelines on the end point would offer more certainty and structure to plans. If developed nations' domestic intentions are to clean up their energy systems, then overseas financing surely deserves no less attention. Creating transparency and reporting standards for energy projects can help expose such inconsistencies and drive more positive change. Setting clear directions and speeds clarifies the nature of change, and sets expectations for planning by investors and businesses. Momentum is building and opportunities are emerging. Governments should galvanize this surge with even firmer action. ❐

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