energy consultancy predicts that installing solar panels in 2030 will be a cheaper way of generating energy in some places than continuing to shovel coal into the furnaces of ageing power plants. Similarly, electric vehicles are likely to become cheaper to buy and run than petrol-powered incumbents over the next decade.

These genuine tipping points could disrupt energy markets and potentially enable much faster change than anybody anticipates today. From this perspective, it is surely only a matter of time before clean-energy technologies come to dominate. But time is precisely what humanity does not have — not if it wants to meet the Paris goal of limiting warming to 1.5–2 °C above pre-industrial levels.

Renewables now capture the bulk of global investments in new power installations each year, covering much of the annual growth in energy demand. That leaves a lot of existing infrastructure that continues to burn oil, coal and gas — with the financial support of governments. Despite efforts to reduce fossil-fuel subsidies, a recent study found that governments still handed over some US$330 billion of subsidies in 2015 (J. Jewell *et al. Nature* **554,** 229–233; 2018).

The consequences are clear. With nearly 1 °C of warming in the bag, the world is already experiencing unwanted effects, such as extreme weather events. These will continue to mount unless and until humanity slashes its greenhouse-gas emissions. A sober look at the numbers suggests that this task will be difficult — if not impossible — without radical interventions to deliberately steer energy producers and users towards sustainable options.

That takes political commitment, which will be one focus of next week's dialogue. The news on this score is mixed at best. US President Donald Trump is promoting a retrograde energy agenda, and has vowed to pull the United States out of the Paris agreement. (Still, despite their rhetoric and ambitions, Trump and his allies have yet to halt coal's probably inevitable decline in the face of cheap natural gas and renewables.)

Support for the Paris agreement remains high outside the United States, but has its limits. Estimates suggest that actions on emissions so far have probably shaved off 1 °C or so from the projected warming this century, but the world remains on course for a rise of well over 3 °C (see page 424). That's true even if countries fulfil their current emissions pledges, which isn't likely.

Perhaps the best news is that developing countries — including China and India, plagued by air pollution in many urban areas — have come to view clean energy through the lens of public health and air quality. Policies on climate and sustainable development that promote clean, low-carbon energy go hand in hand.

"Support for the Paris agreement remains high outside the United States."

Another way to measure progress is to look at where the money is going. Given the scale of the challenge ahead, the goal of policymakers must be to align investments across the climate landscape, from energy efficiency and carbon-free energy sources to green buildings, cities and other infrastructure.

Ultimately, human influence on the climate comes down to one thing: what volume of carbon dioxide and other greenhouse gases is pumped into the atmosphere. This means that ramping up renewables to meet energy demand simply isn't enough. Reducing carbon emissions means making painful choices: halting new investments in the exploration and production of fossil fuels, and then closing down existing facilities. It won't be easy, but eventually that is a story that must be told. ■

Visual science

Results from a Nature *photo competition show the power of images.*

If writing about music is like dancing about architecture, then writing about photography seems a tough ask indeed. Luckily, not everyone sees it that way — and certainly not when it comes to science. As the celebrated US photographer Berenice Abbott wrote in 1939: "To obtain wide popular support for science, to that end that we may explore this vast subject even further and bring as yet unexplored areas under control, there needs to be a friendly interpreter between science and the layman. I believe that photography can be this spokesman, as no other form of expression can be."

In a Careers article this week (page 525), we celebrate both the spirit and the letter of Abbott's words. During March, we asked readers to send in their own photographs to our 2018 #ScientistAtWork contest. Some 330 readers did so; entries ranged from images of researchers at work around the world to depictions of their actual work, and were assessed by a panel of *Nature* journalists and art editors.

The overall winner was a striking and beautifully framed shot of marine biologist Callie Veelenturf kneeling beside a leatherback sea turtle in Equatorial Guinea, taken by her colleague Jonah Reenders. The picture is worth a thousand words to us — or more — and a year's personal subscription to *Nature* for Reenders and Veelenturf.

Overall, the competition entries show the sheer diversity of modern research perhaps better than any words can. If teachers or scientists who visit schools want to demonstrate that the job of a scientist is varied and sometimes extraordinary, then this collection is a good start.

Photography and research have a history that started long before Abbott turned her lens to science. The technique started as a scientific endeavour — indeed, some artists rejected the medium because it looked too lifelike, in a way that a painting or an engraving never could. Still images have recorded, shared and prompted discovery ever since. From the very small, taken through microscopes, to the very far away, imaged by telescopes, photographs comprise an essential and valued contribution to the scientific record.

Can the camera lie? It can certainly bend scientific truth. James Nasmyth, the British engineer and amateur astronomer, produced what looked like impressive photographs of the Moon back in 1874. In fact, the photos were of detailed plaster models of the lunar surface that Nasmyth built from careful telescope observations. It took almost another century before genuine photos of the Moon emerged, under just as bizarre circumstances — when British astronomers used a giant radio telescope and a borrowed fax machine to hack into the 1966 signals sent from the Soviet space probe Luna 9.

Two more photos sent from space proved hugely influential. On Christmas Eve 1968, the *Apollo 8* astronaut William Anders was stunned by what he saw from his window as they flew around the Moon: "Oh my God! Look at that picture over there! Here's the Earth coming up. Wow, is that pretty … You got a color film, Jim?" The resulting image of our living planet suspended in space above the barren rocky surface of the Moon, called *Earthrise*, was described by the wildlife photographer Galen Rowell as "the most influential environmental photograph ever taken".

More than two decades later, another picture of Earth — this time taken by the speeding Voyager 1 probe from 6 billion kilometres away — showed our planet as a mere speck of light amid vast surroundings and was named the *Pale Blue Dot*. (Technically, the picture is a composite made up of three separate frames, each taken through a different colour filter.)

Neutrons, viruses and the (former) planet Pluto: all were found thanks to photographs. But there is something else that runs through the images sent to *Nature*, and not something that is easily captured in academic prose. Spirit, perhaps, or joy; maybe what Abbott called "vivification of the visual image, the warm human quality of imagination added". Do take a look and decide for yourselves. ■