Renewable energy fast becoming a consumer utility

One step forward and countless steps back. That's the general feeling about the past year. The world's effort to tackle climate change was hindered when the Trump Administration backed out of America's commitment to the Paris Climate Accord whilst
still supporting the use of fossil fuels. But, lost in the kerfuff le of sceptics are great stories of progress and advancements made by nations and private organisations with their warm embrace of renewable energy, many in America itself. Here's a look at 2017's
biggest climate change and renewable energy headlines:

1) China to invest $361bn into renewable fuel by 2020 (January 4) The world's largest energy market continued its eff ort to shift from coal to cleaner fuels with a massive $361bn investment in renewable energy. Wind, hydro, solar and nuclear will contribute to over half of the new power generated by 2020, along with creating 13mn jobs in the sector. China will also invest over 1tn yuan (~ $150bn) on solar power, adding close to 1,000 more plants and increasing the solar power capacity by five folds.

2) In the US, there are now twice as many solar workers as coal miners (February 7) Though accounting for just 1.3% of America's electricity, solar power now hires twice as many people as the coal industry.

As more people equip their homes and businesses with solar panels, the labour-intensive nature of installation and maintenance is creating demand for workers.

3) Eleven EU members have already met renewable energy targets (March 14) The EU 2020 strategy, which aims at increasing the

renewables share of the gross final energy consumption to 20%, has already been met by 11 members – three years before the 2020 deadline. The members have further committed to raising the EU target to 27% by 2030.

4) Western US states continue pursuit of clean energy despite Trump's policies (April 1) Despite Trump's hell-bent attempt at undoing years of environmental protection regulations and Obama's renewable energy policies, several western US states are pushing ahead with plans to make their economies greener. There is more than politics at stake, as renewable energy is seen as important to the region's health – both economically and environmentally. States like Oregon, California, Colorado and New Mexico plan to reduce carbon emission levels through investments, tax credits and 'cap and trade' programmes.\

5) Germany achieve a new energy record – renewables generating 85% of electricity (May 10) Renewables were the source of 85% of the electricity consumed by Germany on April 30 2017. With the wind, hydro and solar generating most of the electricity required, the coal-fired power plants had a Sunday's rest. Germany's ambitious 2050 plan to reduce the carbon emission levels to 20% of the 1990 levels seems well within grasp.

6) 100% Renewable Energy By 2035 supported by 1,400 Mayors across the US (June 27th) Some 1,400 mayors from across the USA have joined hands to pass a resolution aiming to make cities completely sustainable by 2035. Renegading against the Trump administration's environmentally regressive proposals – promoting the use of coal and petroleum – the local and state off icials are embracing renewable energy instead. It also sends a message to the world, that the local politicians are ready to bypass the federal government to collaborate and lend international support towards a cleaner future. The group also plans to urge Trump and Congress to implement climate change response policies and support off -shore wind development.

7) Nuclear takes a back seat to renewables for the first time

since 1984 (July 6) After a span of 33 years, renewables overtook nuclear in the US for the months of March and April. New wind and solar plants; accompanied by heavy snow and rainfall fuelling the hydroelectric generators have spiked the power outputs from renewable energy sources. It also comes at a time when issues over nuclear power's cost and safety have come into question.

8) Study finds renewable energy prevented 12,700 premature deaths over nine-year period, (August 17) In a study by Nature Energy, the expansive adoption of renewable energy and the resulting decrease in environmental pollution have saved 12,700 pre-mature deaths in the period of 2007 to 2015. The lower emissions result in people living healthier lives by avoiding respiratory and cardiac problems associated with breathing polluted air. The improvement in health has saved the US $220bn, accounting for lower healthcare costs and fewer sick days. According to another study by Quartz, the US spent $50bn to $80bn on renewable energy subsidies in the same time period and saw climate and healthcare benefits worth half the taxpayer's money. Renewables are proving to be a worthwhile longterm investment.

9) Harnessing water evaporation energy could be a promising fresh source of renewable energy (September 26) Wind, solar and hydro are the most commonly talked about renewable energies. There is a new groundbreaking technology in works – harnessing the energy from evaporation. Scientists exploring the idea think the potential for evaporation harvesting is similar to that of wind and solar. The Great Lakes have enough evaporation energy to fulfil 70% of the US' electricity demand. A machine called the Evaporation Engine contains tiny spores spread over water. The spores expand and shrink as they absorb and release water due to the heat. The motion of the spores can be harnessed to produce electricity.

10) Solar power in high demand and the number-one source of new energy (October 4) Solar energy outpaced all other forms

of power sources in 2016. While renewables accounted for two thirds of the new power added, solar technology was the most popular. Solar is likely to stay at the top, with high demands from China, India, the USA and Japan.

11) Google is now entirely fuelled by sun and wind (November 30) One of the world’s largest Tech Companies, Google, now powers all its infrastructure through wind and solar energy. With depleting costs in wind and solar, Google has completely switched to renewables and is currently the largest corporate customer of clean energy on the planet, with an annual billing of $3.5bn globally.

12) Elon Musk renewable energy switch on the largest ever lithium-ion battery (December 1) After promising the largest lithiumion battery in 100 days, Elon Musk delivered to South Australia in less than two-thirds of that time. The 129-megawatt battery will store energy generated by the Hornsdale Wind Farm and dispatch electricity during shortages, variability and blackouts; reducing reliance on coalpowered plants for backups. The highlights from 2017 are an indication of the progress renewables are making as a consumer utility. The unrivalled innovation, adoption and support will carry forward the conversation and help leapfrog clean energies beyond fossil fuels in 2018.