

China creates world's 1st coal-to-ethanol production line

China has successfully created the world's first production line to turn coal into ethanol, or drinking alcohol, the Chinese Academy of Sciences said on Friday.

Created by Shaanxi Yanchang Petroleum and the academy's Dalian Institute of Chemical Physics in Liaoning province, the production line went into operation in January and has the capacity to make more than 100,000 metric tons of pure ethanol every year, according to Liu Zhongmin, the institute's deputy director.

By 2020, China will build a factory capable of producing 1 million tons of ethanol each year using the same technology, he said.

The country currently produces 7 million tons of ethanol each year using other methods, which can "hardly satisfy" its industrial and energy needs, according to Liu.

"Most countries produce ethanol using food, such as corn or sugar cane, but this is not a viable option for China given its massive population," he said.

"By turning China's abundant coal resources into ethanol, the technology will help safeguard our energy and food security,"

Moreover, ethanol is a green fuel and versatile ingredient. "Utilizing it could reduce our dependency on fossil fuels, and make our industrial production and energy structure more environmental friendly," Liu said.

In addition to alcoholic beverages, ethanol can be used to produce thousands of everyday products from plastics to detergents. It can also replace more toxic ingredients, such as methanol, during industrial production.

Other uses include mixing it with petroleum to increase its fuel efficiency and reduce pollution. An abundant supply of ethanol would also make ethanol-fueled vehicles more viable, Liu said.

Beijing budgets billions of yuan in effort to clean up air



A worker hangs ornaments at the Ming Dynasty City Wall Ruins Park under a blue sky in Beijing this month. [Liu Ping/China Daily]

Beijing will expand funding to reduce air pollution in 2017, including phasing out hundreds of thousands of automobiles and replacing coal furnaces in hundreds of villages, the municipal government said.

So far in March, more than 10 days of clear, blue skies have been recorded. There were 198 such days last year and 186 in 2015, according to the Beijing Environmental Protection Bureau.

In addition, the number of days with severe air pollution mainly due to a high concentration of PM2.5—particulate matter of 2.5 microns deemed dangerous to human health—fell to 39 last year, down from 46 in 2015, 47 in 2014 and 58 in 2013.

PM2.5 is used as a major index to record the concentration of the six major airborne pollutants.

“Beijing saw its average PM2.5 level lowered to 73 micrograms per cubic meter in 2016, a year-on-year decrease of 9.9 percent,” said the capital’s mayor, Cai Qi, giving credit to existing measures such as reducing coal consumption and the number of vehicles.

Data from the environmental protection bureau showed the capital cut PM2.5 levels by 19 percent from 2013 to 2016, said Zhang Dawei, director of the Beijing Environmental Monitoring Center.

Beijing will take tougher measures in 2017.

“We will crack down on air pollution with an iron fist ... to meet the public expectation of blue skies,” Cai said.

Among those measures are subsidizing drivers, as about 300,000 old vehicles

with excessive exhaust will be banned from the roads; and helping 700 villages replace coal-fired boilers with clean energy such as electricity and gas, which would eliminate coal consumption in the downtown districts and southern regions.

In winter, coal consumption for heating in rural areas was a major source of air pollution, Zhang said.

“In 2017, Beijing will lower its coal consumption (including for industrial production and heating) by 30 percent, with the total amount falling to less than 7 million metric tons,” Cai said.

The Action Plan on Air Pollution Control and Prevention stipulated that the capital should lower its PM2.5 concentration to 60 micrograms per cubic meter by the end of this year.

The municipal government plans to spend up to 18.2 billion yuan (\$2.6 billion) this year on stronger pollution-control measures, the Beijing Finance Bureau said. In 2014, the special allocation for air pollution was 12.9 billion yuan.

[News story: Priti Patel will double public donations to the Disasters Emergency Committee East Africa Crisis Appeal this weekend](#)

In response to the unprecedented public support for the Disasters Emergency Committee East Africa Crisis Appeal, this weekend the UK Government will match pound for pound the next £5 million donated by the public.

This is in addition to the £5 million match funding already donated by the UK Government which helped Britain raise a phenomenal £12 million for the [DEC appeal](#) in just 24 hours.

International Development Secretary Priti Patel said:

I want to say a huge thank you to the British people. Once again, the life-saving generosity of the British public has exceeded all expectations with their response to this vital cause. I've seen first-hand how every penny really does make a huge difference to saving lives across East

Africa. That's why the Government will double donations up to £5 million this weekend to make your money go even further.

The Great British public has acted without hesitation to stop people dying of famine and hunger. Right now UK funded aid is reaching those most in need with food, water and emergency healthcare. Now it's time for the international community to step up and follow Global Britain's lead before it's too late.

This new support will double the impact of the public's own donations up to an additional £5 million and ensure that charities working on the ground can reach even more people in need.

This brings total UK Government match funding for the DEC Appeal to £10 million.

The UK's support will go directly to the Disasters Emergency Committee Appeal and provide vital and life-saving emergency supplies.

The Disasters Emergency Committee brings together 13 leading UK aid agencies to raise money at times of humanitarian crisis in poorer countries. By working together we can raise more money to save lives and rebuild shattered communities.

Notes to editors:

Donations can be made at www.dec.org.uk or by calling 0370 60 60 610.

- £25 could provide a month's supply of life-saving peanut paste to a malnourished child.
- £60 could provide clean drinking water for two families for a month.
- £100 could provide supplies to a clinic treating severely malnourished children for a week.

UK support to Somalia:

- In Somalia, more than 6 million people have no reliable access to food and there are 360,000 acutely malnourished children. All the signs are pointing to a famine as bad, or worse, than the one in 2011 which killed 260,000 people. The UK is acting now to prevent this.
- We recently announced humanitarian support for Somalia worth £100 million to respond to famine warnings, on top of a further £10 million announced by the International Development Secretary Priti Patel during a recent visit to Somalia.

- This £110 million of UK aid support will provide:
 - Up to 1 million people provided with emergency food assistance
 - Over 600,000 starving children and pregnant and breastfeeding women provided with nutritional interventions
 - Over 1 million people provided with safe drinking water and hygiene
 - More than 1.1 million people provided with emergency health services.
- Global Britain will bring the international community together in London for a conference later this year to agree future support to Somalia, which is firmly in the UK's interests.

UK support to South Sudan:

- The situation in South Sudan is dire. Children will die tomorrow, and the day after, and the day after that, until the South Sudanese authorities allow food and life-saving aid to reach those most in need.
- Famine has now been officially declared in some parts of South Sudan – the first declaration of famine anywhere in the world for 6 years. 100,000 people in Unity State (Leer and Mayendit Districts) are now at risk of starvation.
- Almost 5 million face the daily threat of going without enough food and water and 3 million people have been forced from their homes because of ruthless violence and widespread rape.
- The UK was one of the first major donors to respond to the UN's appeal to South Sudan and we are leading the way by making sure millions of people in South Sudan get urgently needed food, water and medicine, as well as longer term support to provide much-needed education.
- The UK has announced £100m for 2017/18 that will provide:
 - food for over 500,000 people
 - life-saving nutritional support to more than 27,500 children
 - safe drinking water for over 300,000 people
 - emergency health services for over 100,000 people
 - livelihood support for over 650,000 people and
 - vaccinations for over 200,000 livestock.
- The UK is also leading the way in providing support for the region, bolstering help for neighbouring countries such as Uganda (almost £50 million over the last 3 years) to cope with the influx of refugees from South Sudan.
- In 2016, the UK's support to Uganda has provided: food for 650,000 people including 45,000 children; shelter for 56,250 people; blankets, water containers and sanitary towels for 64,000 people; and vaccinated 210,000 children.
- The UK will not look the other way while people suffer: the Government of South Sudan must put an end to abuses and deliver long-lasting peace.
- The international community now needs to step up alongside Global

Britain to stop famine spreading and help support stability in South Sudan and the region, which is firmly in our interests.

- It is first and foremost the responsibility the country's leaders to alleviate the pressure on its people, and to stop obstructing the UN, as well as NGOs, who are delivering vital lifesaving aid to the South Sudanese people and ultimately create lasting peace and stability.

UK support to Kenya:

- We are responding early and working with the international community to prevent a repeat of the Horn of Africa crisis in 2010/11.
- Our support at an early stage has helped mitigate the impact of droughts, saving lives and reducing the need for costly and often late humanitarian appeals.
- We have provided 11,500 children under 5 with nutrition.
- The Hunger Safety Net Programme (HSNP) – supported by UK aid – aims to reduce poverty and hunger, and build economic resilience for the most vulnerable people in the 4 poorest arid and semi-arid land (ASAL) counties (Turkana, Mandera, Marsabit and Wajir). It covers an area is equivalent to 91% of the UK and 60% of the beneficiaries are women.
- HSNP provides small regular cash transfers as an alternative to food aid to support around 600,000 people, empowering people to make decisions about what they need, cutting out the middle man and reducing waste. Payments are made to households and work out at around £3.33 per person per month, paid every 2 months.
- HSNP can also rapidly scale up to reach a further 1.5 million people by providing emergency cash transfers to prevent the effects of drought. To date, on the basis of satellite early warning data, HSNP has scaled up support 11 times since 2015, including 3 times in response to the current drought.
- All payments are made electronically through biometric systems which are some of the most secure in the world, and mean British taxpayers can be sure that the help they provide goes directly to the less fortunate, not those trying to abuse the system.
- HSNP is now a flagship programme of the Government of Kenya, managed by the National Drought Management Authority (NDMA) as part of the wider National Safety Net Programme (NSNP). The Government now funds over a third (34%) of the programme, having started contributing in 2013. And the Government will be taking on increased costs in future.

UK support to Ethiopia:

- In 2017, a new drought is hitting Ethiopia hard. Over 13 million people are currently in need of food assistance; this figure is likely to rise.
- Across the country, 9.1 million people are without access to water, and 1.9 million need support to prevent their cattle dying. 3 million children and pregnant women are projected to be acutely malnourished by May. People urgently need access to clean water, food and healthcare.
- In response to the continuing drought, the UK has increased much needed support to Ethiopia by giving an extra £11.5 million to provide around 800,000 people with lifesaving clean water, basic food, and emergency nutrition to malnourished children. This will provide emergency

nutrition treatment to 25,000 malnourished children, clean water for 100,000, people and will provide vaccination and treatment to 600,000 cattle.

- Ethiopia is hosts over 800,000 refugees, mainly from South Sudan, Somalia and Eritrea. New refugee arrivals from all 3 countries will continue to increase.
- The humanitarian situation is worsening. Forecasts for the upcoming spring rains are poor, and the lack of rainfall means there will continue to be humanitarian needs, particularly for water and food, throughout 2017.

[News story: £23 million boost for hydrogen-powered vehicles and infrastructure](#)

A new £23 million fund to accelerate the take up of hydrogen vehicles and roll out more cutting-edge infrastructure has been announced by the government today (18 March 2017).

Hydrogen fuel providers will be able to bid for funding in partnership with organisations that produce hydrogen vehicles to help build high-tech infrastructure, including fuel stations. The funding will boost the creation of hydrogen fuel infrastructure and uptake of hydrogen-powered vehicles.

A competition will be launched this summer, and will invite proposals from public organisations, businesses and hydrogen operators. The government will provide match funding for successful bidders as part of its plans to cut carbon emissions, improve air quality and deliver economic opportunities for the UK.

Transport Minister John Hayes said:

The transition to zero emission road transport is both inevitable and desirable as it will improve air quality in many of our towns and cities. Hydrogen fuel cell electric vehicles can play a vital role alongside battery electric vehicles to help us cut harmful emissions.

We know availability of hydrogen refuelling infrastructure can be a potential obstacle to the take up of hydrogen fuel cell electric vehicles. That's why we're providing support to give interested parties the confidence to continue to invest in this new emerging technology to help us achieve our ambition for almost all new cars and vans to be zero emission by 2040.

Hydrogen vehicles can be quickly refuelled using a pump like a conventional petrol or diesel car, but instead use gas. They produce only water as a by-product and have a range of around 300 miles per tank, like conventional vehicles.

The government is working closely with industry on the future direction of the UK automotive sector and has allocated over £600 million for low emission vehicles over the course of this Parliament with an additional £390 million announced at last year's [Autumn Statement](#) for ultra low emission vehicles and driverless cars.

Paul Van der Burgh, President and Managing Director of Toyota (GB), said:

Toyota believes hydrogen fuel cell electric vehicles can play an important role in the transition to a low carbon, low emissions society. We chose the UK as one of the first international markets for our Mirai hydrogen fuel cell car and are pleased that the government is investing in this programme to encourage the further development of refuelling infrastructure and the wider uptake of fuel cell vehicles.

We will continue to work with the government, organisations and industry partners to help the UK realise the significant potential of hydrogen as a clean and sustainable source of power.

Today's announcement builds on the launch of the [Industrial Strategy green paper](#) published in January which outlined plans to fund new high-value economic infrastructure and reaffirmed government commitment to investing in energy innovation and to tackling the causes of climate change.

[Security Council extends mandate of UN mission in Afghanistan for one year](#)

17 March 2017 – The Security Council today extended the mandate of United Nations assistance operation in Afghanistan until 17 March 2018, stressing the political mission's role in supporting an inclusive Afghan-led and Afghan-owned peace process.

Unanimously adopting a new resolution, the 15-member Council also requested the Secretary-General to conduct a strategic review of the UN Assistance Mission in Afghanistan (UNAMA) and report back on the results of this exercise by July 2017, in order to ensure effective support for the Mission.

On the human rights front, the Council requested continued support efforts to

strengthen the protection of children affected by armed conflict, and reiterated the importance of accelerating the establishment of a fair and transparent justice system. In that vein, the Council emphasized the importance of ensuring access for relevant organizations to all prisons and places of detention in Afghanistan.

Further in the text, the Council reiterated its support for the Government of Afghanistan, and in particular to the Afghan National Defence and Security Forces (ANDSF), in their fight against terrorism and violent extremism, calling upon the Afghan Government, with the assistance of the international community, to continue to address the threat posed by the Taliban as well as by Al Qaida, the Islamic State of Iraq and the Levant (ISIL/Da'esh) affiliates and other terrorist groups.