

# Natural Resources PC

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## Climate Change, ETS, Green Finance [M2013-17]

### Weekly Report No 185

Not to be transmitted to third parties

References available upon request

July 18-25 '17

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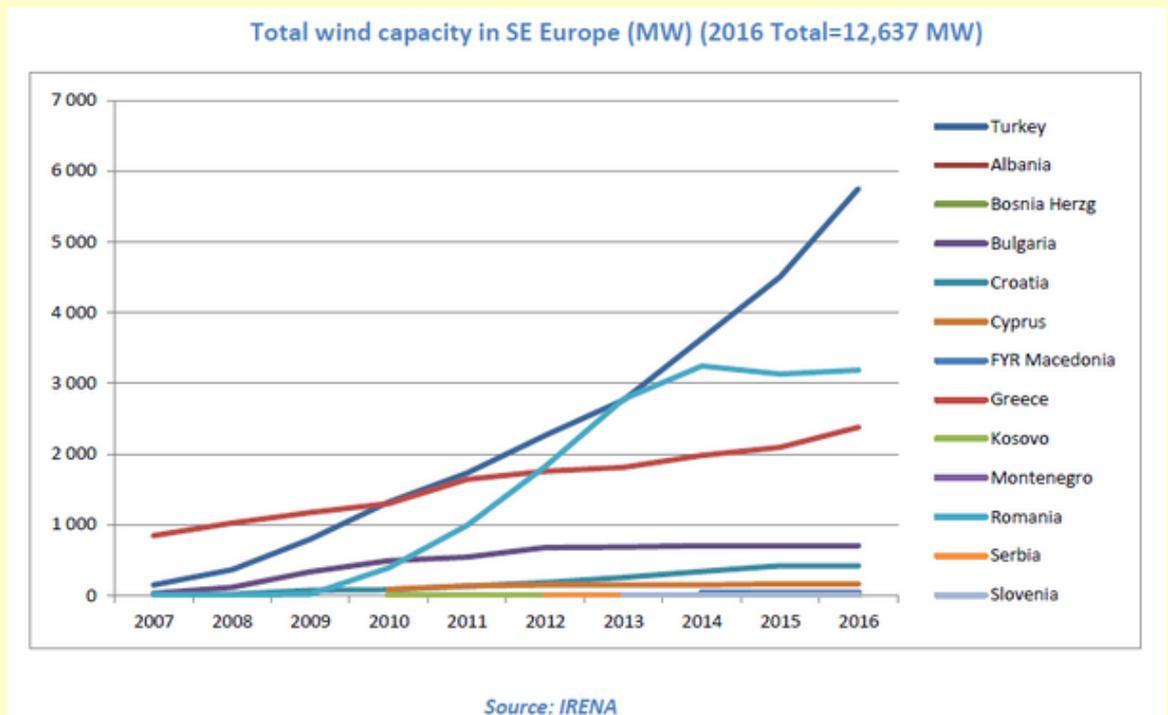
#### EU

#### **EU ETS and EUA auction market: "Market Fundamentals & Prices", issue No 239, May-June 2017**

The first week of May saw the EU ETS market hit a number of 2017 lows, closing as low as 4.4 €/t at one point [see Figure 24], but then recover somewhat to end the week largely unchanged at 4.58 €/t. This behaviour has been a persistent market trend of the last few months, with prices registering sharp drops, a slight bounce, and then gradually settling around a lower mean. Also this week, the European Commission finally released compliance data, which showed the number of Certified Emission Reductions [CERs] handed in for compliance over 2016 was 12.1 Mt, which is down on the previous year. In context, the smaller number meant little to the market, as this is well below years like 2012, when over 500 Mt of offsets were submitted for compliance. Since March 2014, when the revised method of submitting offsets came into use, some 422 Mt have been submitted, with over 75% being either Chinese CERs [173 Mt] or Ukrainian Emission Reduction Units [ERUs] [148 Mt]. The low annual level of offset submission in the last year points to some of the remaining offset quota being saved for later in the phase, when EUA auction volumes will be far more constrained and the EUA-CER spread is likely to be wider, almost entirely due to EUAs being more expensive [Energy Aspects, 2017].



**Total wind capacity in SE Europe, per country: "Market Fundamentals & Prices", issue No 239, May-June 2017**



**Hungarian support scheme for renewable electricity in line with EU state aid rules: Norton Rose 5 July 17**

Hungary/Renewable electricity – On 11 July 2017, the European Commission found a Hungarian support scheme for renewable electricity to be in line with EU state aid rules. The scheme, with a yearly budget of up to HUF 45 billion [approximately EUR 146 million], foresees state support either through a feed-in tariff or through a price premium.

**HFCs: EU gives green light to ratify the Kigali Amendment to the Montreal Protocol, European Council, July 17 '17**

On 17 July, the Council adopted a decision to conclude, on behalf of the EU, the Kigali Amendment to the Montreal Protocol that will ensure the protection of the climate from the powerful GHGs hydrofluorocarbons [HFCs]. With this decision, the EU is ready for formal ratification, and has signalled its continued determination to lead global efforts to tackle climate change.

The purpose of the Kigali Amendment, agreed on 15 October 2016, is to achieve a global reduction in the consumption and production of HFCs. Although GHG do not damage the ozone layer, their release into the atmosphere contributes to climate change and they have a significant impact on global warming.

**EU: green finance labels to boost market, tackle 'greenwashing', July 18 '17**

The EU is considering the introduction of new labels to classify green financial products in an attempt to boost investment in the sector as it seeks to take the global lead in the fight against climate change. The move would be part of a wider plan to promote EU public and private spending on clean energy and other green industries.

The EC estimates that Europe will need 180 billion euros in additional investment every year in the next two decades if it wants to achieve its goal of curbing global warming.

Clearer classification and common labels for green financial products are expected to boost environment-friendly markets and help curb "greenwashing", a practice whereby companies and other organizations claim to be "greener" than they really are.

<http://www.reuters.com/article/us-eu-markets-regulation-idUSKBN1A314O>

**Permission granted for 40 MW UK solar farm, July 18 '17**

UK headquartered Hive Energy has been granted planning permission to develop a 40 megawatt [MW] subsidy free solar park in Hampshire, England. Hive said that the site's location, close to its head office, would enable its R&D team to pilot and test solar and storage technologies.

<http://www.cnn.com/2017/07/18/permission-granted-for-solar-farm-could-save-16500-tons-of-co2.html>

**Ireland plans to reduce carbon emissions by 30% before 2030, July 19 '17**

The Government's National Mitigation Plan is expected to outline the steps which need to be taken to fulfill the transition to a low-carbon, environmentally sustainable economy.

Ireland has an EU obligation to reduce its carbon emissions by 30% before 2030.

Oisín Coghlan, the Director of Friends of the Earth Ireland, has outlined what he wants.

He said: "We hope to see new measures and policies across all sectors of the economy to reduce Ireland's climate pollution. "So we need to see measures in transport, in energy, in our homes and offices and in agriculture to begin to reduce our emissions. "We've a long way to go, but we've got to start and so far Ireland hasn't started, and we need to see a big plan to get us on the road."

<http://www.breakingnews.ie/ireland/government-to-launch-plan-to-reduce-irelands-carbon-emissions-by-30-before-2030-798477.html>

### **German car giants ‘may have colluded on emissions’, July 21 ‘17**

Germany's biggest carmakers are being investigated on suspicion of -operating a secret technology cartel for the past 20 years that led to the dieselgate emissions scandal, it was claimed today. Daimler, BMW, Volkswagen and the two VW subsidiaries, Porsche and Audi, have been meeting in secret to agree on the technology they will offer their customers, according to allegations published in Spiegel magazine.

The collusion was a direct cause of the diesel emissions scandal, which emerged at VW two years ago, after the five carmakers agreed to limit genuine emissions cleaning technology, the magazine alleged. The companies are now under investigation by both the German anti-trust office and the European Commission over the allegations, it claimed. Authorities have declined to confirm the report, citing ongoing investigations.

The explosive claims come at the end of a bruising week for the German car industry, which has already seen the emissions scandal threaten to engulf more brands. Daimler AG has recalled more than 3m Mercedes-Benz diesel cars to lower their emissions, while Audi on Friday announced a recall of 850,000.

<http://www.telegraph.co.uk/business/2017/07/21/german-car-giants-may-have-colluded-emissions/>

### **EIB signs EUR 24m loan with Greek Terna Energy Group, July 21 ‘17**

The European Investment Bank [EIB] has signed a EUR 24m financing agreement with Greece's Terna Energy Group to help fund the development, construction and operation of three windfarms in Viotia, central Greece. Eurobank Ergasias acted as a co-lender. The EIB's loan benefits from the support of the EU budget guarantee under the European Fund for Strategic Investments [EFSI], the financial instrument of the Investment Plan for Europe.

“The EIB is committed to financing green energy projects across the EU. We are particularly pleased that this project promotes renewable and clean energy for the people of Greece, but it also enhances energy security and will help the country meet its renewable energy targets. This is precisely the kind of operation the Investment Plan for Europe was designed to support. I am delighted about

this further step to bring the benefits of the European Fund for Strategic Investments to Greece. Looking ahead, the EIB is following developments in the Greek electricity sector and stands ready to finance sound projects that fulfil its criteria and EU energy policies,” said Jonathan Taylor, EIB Vice-President responsible for lending in Greece.

*<http://www.eqmagpro.com/juncker-plan-financing-for-windfarms-in-greece-eib-signs-eur-24m-loan-with-terna-energy-group/>*

### **World's first floating wind farm emerges off coast of Scotland, July 23 '17**

The world's first full-scale floating wind farm has started to take shape off the north-east coast of Scotland. The revolutionary technology will allow wind power to be harvested in waters too deep for the current conventional bottom-standing turbines.

The Peterhead wind farm, known as Hywind, is a trial which will bring power to 20,000 homes.

Manufacturer Statoil says output from the turbines is expected to equal or surpass generation from current ones. It hopes to cash in on a boom in the technology, especially in Japan and the west coast of the US, where waters are deep. "This is a tech development project to ensure it's working in open sea conditions. It's a game-changer for floating wind power and we are sure it will help bring costs down," said Leif Delp, project director for Hywind.

*<http://www.bbc.com/news/business-40699979>*

### **Tesla and Elon Musk's moment of truth with first mass-market car, FT, July 23 '17**

For Dom Larose, there was an obvious next step to shrinking his carbon footprint after he had switched his home in the UK to a renewable source of electricity: buying an electric car. When the Vodafone sales executive first made the move four years ago, however, it did not come cheap. Prices for the Tesla Model S, the car he bought, start at £62,000.

“You drive into the car park at work — the Audis and BMWs — it’s something different,” he says. And, like many Tesla fans, he admits to being inspired by the Californian carmaker’s irrepressible chief executive: Elon Musk “is a bit of a risk-taker, putting his money where his mouth is”.

Mr Musk’s army of fans is marching again. Mr Larose was one of thousands to register their interest last year in buying the company’s forthcoming Model 3. The first handful of the cars is about to hit the roads, with deliveries scheduled to begin at the end of this week, though the early customers will all be Tesla employees, as the company keeps the first cars close to home so that it can identify any quality problems.

**UK govt launches 1st phase of GBP-246m battery investment, July 24 '17**

The UK Department for Business, Energy and Industrial Strategy [BEIS] today announced the start of its GBP-246-million [USD 319.8m/EUR 274.6m] four-year investment in battery technology, known as the Faraday Challenge.

The government has kicked off the investment programme, which it says is a key part of its industrial strategy, with the launch of a GBP-45-million competition to set up a centre for battery research. Research is one of the three streams of the Faraday Challenge's competitions, with the other two being innovation and scale-up.

"Batteries will form a cornerstone of a low carbon economy, whether in cars, aircraft, consumer electronics, district or grid storage," noted professor Philip Nelson, chief executive of the Engineering and Physical Sciences Research Council [EPSRC].

[https://renewablesnow.com/news/uk-govt-launches-1st-phase-of-gbp-246m-battery-investment-577128/?utm\\_source=Renewables+Now\\_subscribers+and+newsletter&utm\\_campaign=c07ce7a87a-Renewables\\_Now\\_The\\_Daily\\_Newsletter\\_15\\_06\\_15\\_2017&utm\\_medium=email&utm\\_term=0\\_990771841c-c07ce7a87a-259514753](https://renewablesnow.com/news/uk-govt-launches-1st-phase-of-gbp-246m-battery-investment-577128/?utm_source=Renewables+Now_subscribers+and+newsletter&utm_campaign=c07ce7a87a-Renewables_Now_The_Daily_Newsletter_15_06_15_2017&utm_medium=email&utm_term=0_990771841c-c07ce7a87a-259514753)

**EU Transaction Log – Netherlands**

EU Transaction Log presents details of emission rights for all facilities participating in the EU ETS [includes data for all countries and for all years from the start of the ETS]. The table below presents some Netherlands installation names, allowances and status for the Phase 3 [2013-2020] period for 2019.

Installation Name	Allowance	Allocation *	Status
Papierfabriek Doetinchem B.V.		25401	Open
Parengo B.V.		116334	Open
Nedmag Industries Mining & Manufacturing Holding			Closed
Nedmag Mining and Manufacturing Holding B.V.		80291	Open
GDF SUEZ Energie Nederland N.V. Centr. Gelderland			Open
Rijnmond Energie C.V.		0	Open
Energiecoöperatie Greenhouse Energy U.A.		9040	Open
Ruigenhil Vastgoed B.V. FNsteel		21780	Open
Ruigenhil Vastgoed B.V. Nedstaal BKG 1		20113	Open
Tata Steel IJmuiden bv BKG 1		9531634	Open

*\*in current ETS period before last 30 April*

**USA**

**Calif Assembly committee clears measure for 100% renewables, July 18 '17**

In June, California's Senate passed SB 100 in a 25 to 13 vote. The bill has now passed its first hurdle in the Assembly.

The California Assembly’s Utilities and Energy Committee last week approved SB 100, moving the state one step closer to its 100% renewable energy goal. SB 100 would increase California’s current renewable portfolio standard to 60% by 2030 and establish a goal of meeting 100% renewable energy by 2045. If the bill becomes law, California would be the second state, after Hawaii to strive for 100% renewables. But unlike Hawaii, California's 100% renewable energy goal is not a mandate.

<http://www.utilitydive.com/news/california-assembly-committee-clears-measure-for-100-renewables-goal/447277/>

**Coal has no future, says US railroad boss, FT, July 19 ‘17**

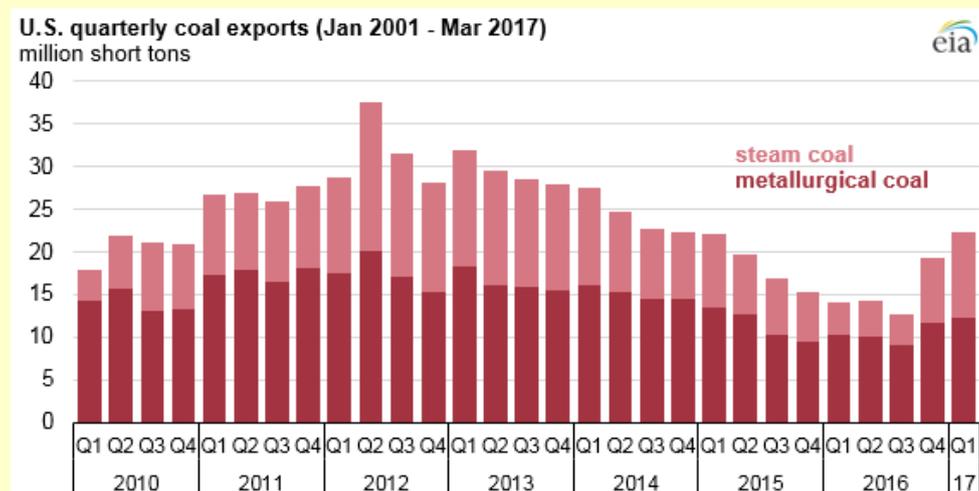
One of the largest haulers of US coal says fossil fuels have no future, despite pledges to the contrary from President Donald Trump.

CSX, a freight railroad company with origins in the bituminous coal seams of Appalachia, will not buy a single new locomotive to pull coal trains, chief executive Hunter Harrison told analysts on Wednesday. “Fossil fuels are dead,” Mr Harrison said. “That’s a long-term view. It’s not going to happen overnight. It’s not going to be in two or three years. But it’s going away, in my view.”

Yet US power generators are building more plants fuelled by cheap natural gas, displacing old coal-fired units. Falling costs for solar and wind energy have also eaten into coal’s market share.

North American railroads have reshaped their asset holdings in acknowledgment that coal’s apex has passed. Lance Fritz, chief executive of the Union Pacific railroad, said in a recent interview that Mr Trump’s move to scrap Clean Power Plan regulations was unlikely to grow its coal business. “It takes away a headwind," he said.

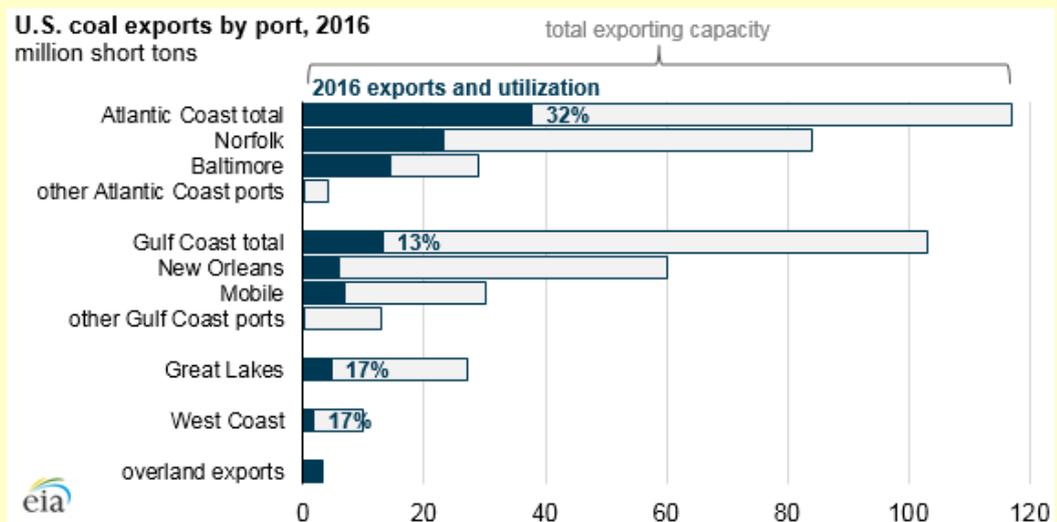
**US coal exports increased over the past six months, July 20 ‘17**



Coal exports for the first quarter of 2017 were 58% higher than in the same quarter last year, with steam coal exports increasing by 6 million short tons

[MMst] and metallurgical coal exports increasing by 2 MMst. Most of these exports were shipped from Atlantic Coast and Gulf of Mexico ports. In EIA’s most recent Short-Term Energy Outlook [STEO], EIA expects growth in coal exports to slow in the coming months, with total 2017 exports forecast at 72 MMst, 11 MMst [19%] higher than the 2016 level.

With coal exports running well below export capacity, no significant expansions of coal export facilities in the US are currently under construction. Coal export capacity in 2016 totaled 257 MMst, compared with total coal exports of 61 MMst. Facilities in the Norfolk, Virginia, area alone have the capacity to export approximately 84 MMst annually—more than the total amount of coal exported from all U.S. ports in 2016.



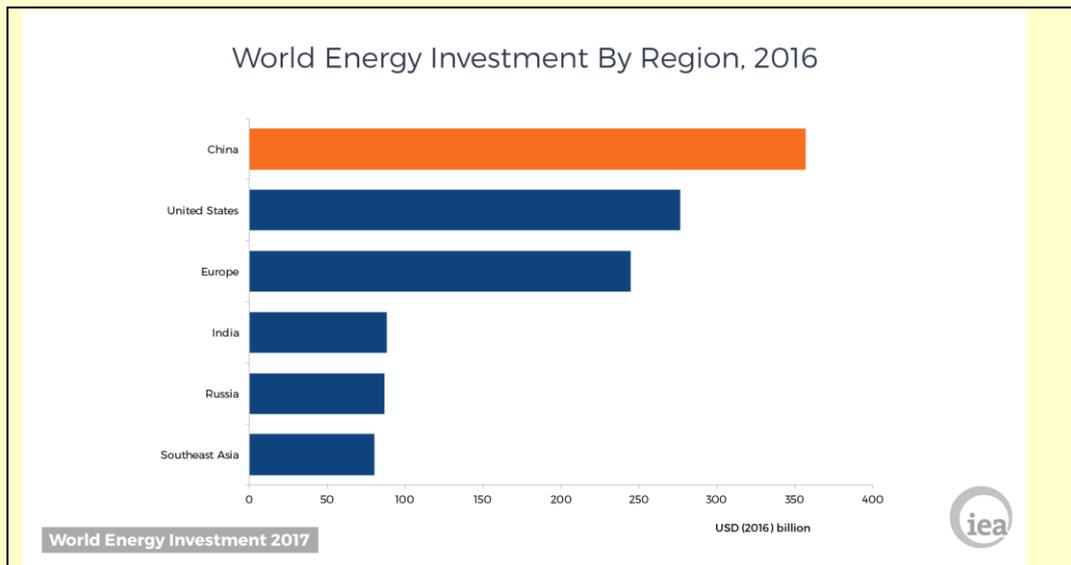
<http://www.theenergycollective.com/todayinenergy/2409012/u-s-coal-exports-increased-past-six-months>

## China

**China: World Energy Investment 2017, IEA 2017**

*Regional trends in investment*

China remained the largest destination of energy investment, taking 21% of the global total yet the makeup of investments in China has been changing. 2016 saw a 25% decline in commissioning of new coal-fired power plants. Today, energy investment in China is increasingly driven by low-carbon electricity supply and networks, and energy efficiency.



### **Beijing aims to curb city's use of coal by 2020, July 19 '17**

China's capital city Beijing is aiming to cut its coal consumption to below 5 million mt by 2020 and limit the use of coal in smog-prone areas, a document issued by the Beijing Municipal Government showed on Tuesday.

The city, which suffers from bouts of choking pollution, also pledged in a five-year-plan to boost renewable energy's share of total energy consumption to at least 8 pct by 2020 from 6.6 pct in 2015.

Beijing currently uses about 11 million mt of coal a year but has been strongly promoting the use of gas and renewable energy.

The city also aims to keep total annual energy consumption below 76 million mt of coal equivalent by 2020, compared with 68.5 million mt in 2015, the document showed. It will also try to cap total emissions of CO<sub>2</sub>, or climate-warming greenhouse gas, by around 2020 or even earlier, according to the plan.

<http://en.ccchina.gov.cn/Detail.aspx?newsId=68493&Tid=96>

### **Volvo electric vehicle push reflects China's leadership ambition, July 20 '17**

Volvo made headlines earlier this month when it announced that electrification will be "at the core of its future business" and is "paving the way for a new chapter in automotive history".

But while the Chinese-owned company's commitment to stop producing new vehicles powered solely by internal combustion engines by 2019 is bold, it makes a lot of sense given global trends in the automotive sector, and China's own ambitions to become a world leader in electric vehicles [EVs].

To shift away from combustion engines, Volvo will introduce a portfolio of EVs across its range that includes fully electric cars, and hybrid cars, which use both battery power and a conventional engine.

“This announcement marks the end of the solely combustion engine-powered car,” said Håkan Samuelsson, Volvo Cars president and chief executive. “Volvo Cars has stated that it plans to have sold a total of one million electrified cars by 2025. When we said it we meant it.”

<http://www.climatechangenews.com/2017/07/20/volvo-electric-vehicle-push-reflects-chinas-leadership-ambition/>

### **EC proposes new min. import price scheme for Chinese PV, July 21 ‘17**

The European Commission [EC] has arrived at a new mechanism for setting the minimum price for solar imports from China through September 2018, and has proposed separate rates for mono- and multi-crystalline cells and modules.

Taking into account feedback from interested parties, the EC has accepted the fact that the current minimum import price [MIP] for photovoltaic [PV] cells and modules, adjusted quarterly, is no longer adequate. The new measure of choice is a variable duty MIP, distinguishing between mono- and multi-crystalline products, according to a statement on Wednesday.

The commission is proposing starting rates, which will be gradually converging to current solar prices, based on data by Taiwanese market intelligence agency PV Insights. The EC noted that most of the interested parties that helped in its review have mentioned PV Insights as a reliable source of price statistics, with SolarWorld [ETR:SWV] being an exception.

<https://renewablesnow.com/news/ec-proposes-new-minimum-import-price-scheme-for-chinese-pv-576859/>

### **Establishment of ‘Green Manufacturing Alliance’, July 23 ‘17**

A green manufacturing alliance was inaugurated Saturday to better support the country's green and sustainable development, according to the Ministry of Industry and Information Technology [MIIT].

Led by the ministry, members of the Green Manufacturing Association of China [GMAC] are from China's leading scientific research institutions and manufacturing enterprises, covering such industries as iron and steel, building material, energy, textile and finance. More than 400 representatives from multinational enterprises, international institutions and foreign embassies attended the inauguration ceremony.

"China should eliminate backward production capacity with high energy consumption and high pollution and stick to the path of sustainable development," said Xin Guobin, vice minister of the MIIT. According to the ministry, the alliance will serve as a platform for China's green manufacturing businesses to cooperate with financial institutions and multinational enterprises.

<http://en.ccchina.gov.cn/Detail.aspx?newsId=68550&Tid=96>

**Key China climate think-tank vice director joins Energy Foundation, July 24 '17**

One of China's key climate policy experts has left his role as vice director of China's government-led climate policy think-tank NCSC to become president of NGO Energy Foundation China. <http://carbon-pulse.com/37750/>

**Elsewhere in the World**

**How the G20 can supercharge green finance, July 17 '17**

Paul Fisher of the University of Cambridge Institute for Sustainability Leadership on why political leadership is crucial to making climate change a material risk for mainstream investors

In order to control climate change, a range of radical policies will have to be adopted by the world's authorities – towns, cities, states, national governments and their agencies, and international organisations. The G20 and its related groupings have an important role to play in areas such as knowledge-transfer, coordination and sharing the burden.

This is especially the case when more and more investors are warning that the impacts of climate change on portfolios can no longer be ignored. The asset manager Schroders is the latest company to speak publicly about the escalating risks.

The work of the G20 Green Finance Study Group [GFSG], explicitly referenced in the G20's communiqué in 2016, has continued this year, with the aim of bringing green finance into the mainstream of investment activities.

The most recent background paper on risk analysis, published at the end of the Hamburg G20 summit, identified the institutional and market barriers that still exist around green finance, as well as options for enhancing the ability of the financial system to mobilise private capital for green investment.

The report uses a number of case studies to demonstrate how environmental issues pose a material financial risk to businesses, and need to be treated as such. For example, a study by De Nederlandsche Bank surveyed relevant firms and found that almost 10% of the total assets for banks; 4.5% of assets for insurers; and more than 12% of assets for pension funds were currently exposed to fossil fuel and carbon-intensive industries.

<http://ethicalcorp.com/how-g20-can-supercharge-green-finance>

**New carbon-capturing membranes may reduce GHG emissions, July 24 '17**

Scientists in the Netherlands have developed a promising new membrane material to filter CO2 emissions.

Researchers believe the new ceramic, ion-conduction membrane will help curb GHG by trapping CO<sub>2</sub> and converting it into fuel, though it may not be ready for commercial adoption for a few more years.

Current carbon-capture technologies are rather inefficient and expensive, limiting their commercial appeal. But scientists suggest more efficient energy use and an increase in sustainable energy sources won't be enough to sufficiently curb GHG emissions and avoid the negative impacts of global warming -- enter carbon-capture technologies.

An essential component of carbon capture is finding a sustainable and energy-efficient use for the captured carbon. Current methods for turning trapped CO<sub>2</sub> into usable synthetic fuel are energy intensive.

[https://www.upi.com/Science\\_News/2017/07/24/New-carbon-capturing-membranes-may-reduce-greenhouse-gas-emissions/8501500908128/?utm\\_source=sec&utm\\_campaign=sl&utm\\_medium=1](https://www.upi.com/Science_News/2017/07/24/New-carbon-capturing-membranes-may-reduce-greenhouse-gas-emissions/8501500908128/?utm_source=sec&utm_campaign=sl&utm_medium=1)

## **India**

### **Diverting \$25 billion away from clean energy fund, July 24 '17**

The Indian government is diverting some \$25 billion earmarked for clean energy to an unrelated policy, a national news site revealed on Monday. Narendra Modi's administration has won plaudits internationally for hiking taxes on coal production and aiming to install 175GW of renewables by 2022.

Yet the biggest pot of money raised to support solar, wind and other climate-friendly power sources has been sacrificed to a major reform of India's goods and services tax [GST]. The move was confirmed by the finance ministry in response to a query filed under India's Right to Information Act by Scroll.in.

Since Modi took office in 2014, the coal cess has been raised from 50 rupees a mt [\$0.78] to 400 [\$6.21]. The idea was to dedicate that revenue to greening the economy.

## **Saudi Arabia**

### **Bidding process for 400-MW wind plant, July 17 '17**

Saudi Arabia, the world's biggest exporter of crude oil, moved a step closer toward the construction of its first utility-scale wind-power project.

The energy ministry asked potential bidders and plant developers to submit their qualifications to build the 400-megawatt plant at Dumat Al Jandal in the the kingdom's northwestern Al Jouf region, it said Sunday in an emailed statement. Companies will be able to present their qualifications through August 10 and will have through January to submit work proposals, according to the statement.

Saudi Arabia plans to develop 30 solar and wind projects over the next 10 years as part of a \$50 billion programme to boost power generation and cut its oil

consumption. The country will produce 10 pct of its power from renewable energy by 2023, Energy Minister Khalid Al-Falih said in April. Earlier that same month, the ministry listed 51 companies it said were qualified as potential bidders in the Saudi renewable-energy program. The country sought bids in April for a 300-megawatt solar project and aims to announce a winner in November, the ministry said.

<http://www.arabianbusiness.com/content/376451-saudi-arabia-starts-bidding-process-for-400-megawatt-wind-plant>

### Hybrid solar-gas plants produce world cheapest CSP, July 18 '17

Under the management of Saudi Electricity Company [SEC], Saudi is planning its first ISCC project combined with CSP---Duba 1 ISCC power station. The project will mostly utilize F-class gas turbines for energy generation, with the concentrating solar parabolic trough. The parabolic trough will generate 50 MW of the plant's total 605 MW of capacity. Duba 1 will be the largest integrated CSP capacity in the Arabian Gulf region once it's completed by 2018.

As construction starts on the Duba 1 plant, work is progressing simultaneously on the other ISCC project in the kingdom: the 1,390 MW Waad Al Shamal plant with 50 MW CSP. As SEC indicated, "We got the cheapest CSP cost per installed kilowatt from Duba 1 and Waad Al Shamal – less than \$1,600/kW, meaning the capital cost of the solar thermal facility is projected to be less than half the lowest CSP cost achieved up until now. By comparison, the capital cost for stand alone parabolic-trough plants without storage currently ranges from \$3,500/kW to \$8,000/kW, according to IRENA's report.

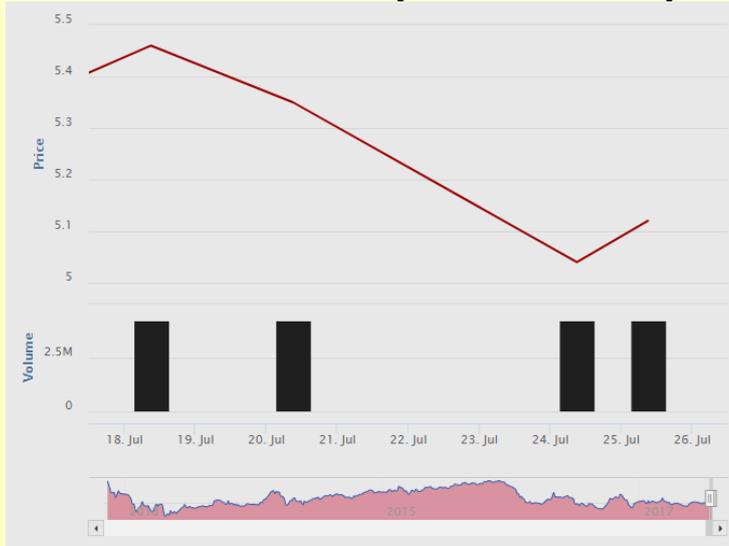
[http://www.cspfocus.cn/en/market/detail\\_262.htm](http://www.cspfocus.cn/en/market/detail_262.htm)

## EU Emissions allowances

### EUA primary market auction July 18-25 '17

Date	Contract	Median €/mtCO <sub>2</sub>	Auction volume mtCO <sub>2</sub>	Most active country
18/7/2017	EUA 3. Phase	5,41	4261500	IT: 3920280
19/7/2017	EUA 3. Phase	5,36	4857000	IT: 3855660
20/7/2017	EUA 3. Phase	5,34	4261500	IT: 3841300
21/7/2017	EUA 3. Phase	5,22	4473000	NA
24/7/2017	EUA 3. Phase	5,01	4261500	IT: 3618720
25/7/2017	EUA 3. Phase	5,05	4261500	IT: 3676160

**EU emissions allowances July 18-25 '17: Primary market auction**



**EU emissions allowances July 18-25 '17: Secondary market auction**



Source: European Energy Exchange

