Shellto Buy French Offshore Wind-Power Developer

Shell to buy floating offshore wind energy developer EOLFI
Shell has agreed to buy French floating wind power developer EOLFI for an undisclosed fee through its subsidiary Shell New Energies.

EOLFI was founded in 2004 and has a current portfolio of 145MW solar and 1GW onshore wind power. Since 2012, the company has focused on floating offshore windfarms in France and is part of a project with MHI Vestas to develop the pilot Groix & Belle-Ile windfarms off the coast of Brittany.

The deal is subject to the standard regulatory and ministerial approvals and should be completed by the end of December 2019.

Shell vice president for offshore wind Dorine Bosman said: “EOLFI has been a pioneer of floating wind development. We believe the union of EOLFI’s expertise and portfolio with

Shell’s resources and ability to scale-up will help make electricity a significant business for Shell.”

Shell’s stock price currently stands at 2333p a share on the London Stock Exchange, lower than its 2019 peak of 2612p on 30 July.
EOLFI founder Alain Delsupexhe said: “EOLFI joins the Shell group at the time when the market of floating wind is taking off globally.

“EOLFI’s heritage in floating wind combined with Shell’s offshore expertise and global footprint will enable us to expand offshore, but also onshore with our wind and solar projects as part of the Shell New Energies division.”
Shell New Energies

Shell has moved into the renewable energy sector since it announced that it would invest $2bn a year into new energy schemes in 2018.

In 2019 it rebranded its energy supply business from First Utility to Shell Energy and switched its UK energy customers to 100% renewable energy, whilst Shell New Energies invested in a 20% in Indian solar company Orb Energy in October 2019.
Floating offshore wind farms

Floating offshore windfarms see wind turbines mounted on a floating buoyant structure, which require fewer materials to build and offer the ability to build offshore windfarms where water depths are as much as 50m to 60m.

The first operational floating offshore windfarm was the Hywind Pilot Park off the coast of Aberdeenshire in Scotland.

Several companies have signed agreements to develop and build more floating offshore windfarms. Equinor will invest $550m to build the 88MW Hywind Tampen windfarm to power its oil and gas operations in the Norwegian North Sea, whilst Ideol and Taisei signed a memorandum of understanding (MoU) in February 2019 to

develop a floating windfarm in Japan.

Amid climate worries, Mexico doubles down on fossil fuels

On the same September day that activist Greta Thurnberg gave a fiery speech in New York demanding world leaders tackle climate change, Mexico's president was touting achievements of a wholly different kind: increasing funding for oil production.

"We're investing in refineries. It hasn't been done for a long time," President Andres Manuel Lopez Obrador told reporters at a news conference in Mexico City.

"What was invested this year is going to be repeated next year," promised Lopez Obrador, noting that the government had already funnelled more than 12bn pesos ($600mn) towards revamping oil production.

The leftist leader, who was elected in a landslide last July, has framed the investment as a way to wean Mexico off its dependency on foreign energy supplies, as well as fuelling economic development through increased oil production.

But at a time when countries are facing mounting pressure to curb emissions and stave off threats from a warming climate, environmental experts say the Mexican government is moving in the wrong direction.

"While Mexico should be abandoning (oil) production, they're

rehabilitating refineries … under a logic of national sovereignty," said Leon Avila, a professor of sustainable development at the Intercultural University of Chiapas.

"It's an archaic perspective, based on production in the 70s during the oil boom, and they think they can do the same thing – when really we're in another context," he told the Thomson Reuters Foundation.

Last Monday, Mexico's government announced it would expand the rules of its "clean energy certificates" (CEL) programme to make them available to older hydroelectric plants operated by state utility company CFE.

The programme previously applied only to new projects, creating an incentive for local and foreign firms to invest in green energy.

The CEL-certified energy can be sold to big companies that are required to obtain a percentage of their electricity from clean sources.

But in a statement on Tuesday, CFE director general Manuel Bartlett Diaz said that, in line with the president's vision for energy sovereignty, there was "no reason to subsidise private (electricity) generating companies". Industry leaders and environmental experts said the move weakens incentives for renewable energy investment, and risks Mexico's compliance with the 2015 Paris Agreement to fight climate change.

The Mexican CCE business council said on Tuesday that the change could jeopardise up to $9bn in foreign and local clean energy investments tied to the original CEL rules.

"The decision detracts from the only mechanism considered by law to drive Mexico's energy transition and meet the mandatory national clean energy adoption goals," the CCE said in a statement.

The Lopez Obrador administration has emphasised its commitment to tackle climate change and adhere to the Paris accord.

At a UN climate conference last December, Sergio Sanchez, then undersecretary for environmental protection, said the government would implement "concrete policies and actions focused both on reducing emissions and adapting to climate

change”.
The Mexican senate last week also called on the federal government to declare a “climate emergency” and take necessary steps to address climate threats.
Those can range from wilder weather and rising seas to more crop-killing droughts that can drive worsening poverty and migration.
But at a press conference the following day, the president shied away from recognising climate change as a crisis.
“We have already considered a series of measures to face the climate change phenomenon in the Development Plan,” Lopez Obrador said.
But the president’s description of the plan – listing conservation efforts but omitting any policies to reduce emissions – irked environmentalists.
“There is a lack of understanding for the climate crisis we are confronting,” said Claudia Campero from the Mexican Alliance Against Fracking, an advocacy group.
According to Avila, the university professor, the president has prioritised ending Mexico’s entrenched poverty but is using oil as the primary engine to drive prosperity.
“He should care about climate change, but between climate change and going down in history for ending poverty…
well obviously he prefers that,” Avila said.
Among Lopez Obrador’s most important projects is the construction of a new oil refinery in his home state of Tabasco.
The project is set to cost $8bn, and the government says it would generate up to 23,000 jobs.
But besides boosting Mexico’s carbon footprint, the refinery, at a coastal site, is vulnerable to climate threats, environmental experts said.
Local media reported this week that the property had flooded due to heavy rains.
Environmentalists also point with concern to the government’s proposed 2020 budget, which would see fossil fuel funding continue to increase.

Under the proposal, the energy ministry's budget would jump more than 70% compared to last year, to 48.5bn pesos ($2.4bn), following a budget increase this year of over 900% compared to 2018.

According to an analysis of the budget published in September by a coalition of environmental groups, 96% of the money is intended to support oil and natural gas related projects.

"There is no room for more development of fossil fuel extraction," said Campero, the fracking opponent." (But) that's far from being the vision of this government."

The budget does include about 56bn pesos ($2.8bn) for "adaptation and mitigation of the effects of climate change," but of this, 70% is being set aside for transporting natural gas, a somewhat cleaner fossil fuel, Campero said.

A spokeswoman for the Mexican environment ministry did not respond to numerous requests for comment.

Conspicuously absent from the budget, advocates say, is funding for expanding renewables, despite the country's potential to adopt clean energy.

According to a 2017 study from the Friedrich Ebert Foundation, which focuses on promoting democracy and social programmes, 80% of Mexico's energy currently comes from fossil fuels.

But the country's landscape and weather conditions mean it could supply its electricity needs entirely from renewable sources, the study noted.

The Lopez Obrador administration has appeared reticent to capitalise on this potential, however.

In January, the government cancelled a public auction for companies to bid on clean energy contracts.

"Mexico is a very rich country in terms of its potential in renewables," said Pablo Ramirez, a campaigner at Greenpeace Mexico.

"But since the arrival of the new administration, that's been completely scrubbed off the map."

Mexico's 2020 budget is awaiting final approval by congress this month. – Thomson Reuters Foundation.

Qatar stresses role of natural gas in meeting economic and environmental challenges

Qatar has stressed the importance of natural gas in meeting the economic and environmental challenges facing energy consumers around the world.

Many countries around the world are searching for the right balance of reliable and secure sources of energy, which can drive their growth, while addressing environmental concerns at the same time, HE the Minister of State for Energy Affairs Saad bin Sherida al-Kaabi told the 21st ministerial meeting of the Gas Exporting Countries Forum (GECF).

“In this effort, many are discovering the versatile, flexible, economic, and environmental qualities of natural gas as a key enabler in the journey to achieve a lower-carbon economy,” he said.

He stressed on Qatar’s commitment to ensuring the continued availability of reliable LNG (liquefied natural gas) supplies to world markets, and to promoting greater growth in the LNG industry, as well as to serving the growing needs of its

clients.

“We all have the same objective: To place natural gas at the heart of the energy industry as a fuel of the future to affirm our true belief that natural gas is a cornerstone in the energy transition and a destination fuel, not merely a transition fuel,” he said.

Drawing attention to unprecedented recurrent climatic conditions, including mean temperatures, turbulent seasonal cycles and extreme events, al-Kaabi had recently said it is time to take another look at natural gas and the number of advantages it has to make it a pivotal element in any strategy to tackle environmental challenges.

Qatar has highlighted the efforts to reinforce its position as the world’s leading LNG producer, which include the North Field expansion to increase the LNG production capacity to 110mn tonnes per annum by 2024, and a major ship-building campaign to build up to 100 LNG carriers over the next decade.

Musk Says Tesla Has Finally Made a Ready-to-Deploy Solar Roof

Almost three years after Tesla Inc. Chief Executive Officer Elon Musk unveiled solar roof shingles as part of his push to buy SolarCity, the automaker says it finally has a version of the tiles that it can mass produce.

“It’s been quite hard,” Musk said on a conference call late Friday. “Roofs need to last a long time. When you add electrification to the roof, it’s a fair bit of complexity.”

The sleek roof is a key part of Tesla’s push to revive its struggling solar business. Musk unveiled the product in 2016, but the company hasn’t been able to bring production up to full scale. The photovoltaic tiles are designed to resemble regular shingles, unlike solar panels atop a roof.

The latest version of the shingles was introduced after Tesla lost its status as the biggest U.S. rooftop solar company. It’s also been sued by Walmart Inc. over fires at a half-dozen of the big-box stores that had Tesla solar systems, and the company still faces litigation from shareholders over the controversial SolarCity acquisition.

Signs of a Bounce Back

Tesla’s quarterly solar installations increase for first time in a year

Tesla initially said it would have a slow roll-out of the solar roof. But issues with aesthetics, cost and manufacturing process have dogged production. At one point in 2018, Tesla was making enough solar-roof shingles for just three to five homes a week.

Earlier this year, Musk declared 2019 as “the year of the solar roof.” In July, he tweeted that Tesla was “spooling up production line rapidly,” and that he hoped to manufacture about 1,000 roofs each week by year-end.

On the call Friday to discuss the third version of the roof, he reiterated the goal of getting to 1,000 roofs per week in the next several months but acknowledged that there might be setbacks.

“It’s an odd and weird product,” he said. “Why would anyone make a solar roof? How strange. But it just is a thing that should be. So we’re going to make it.”

Green Climate Fund attracts higher pledges, open for more

LONDON (Thomson Reuters Foundation) – Wealthier countries on Friday promised nearly $9.8 billion over the next four years to an international fund to help poorer nations develop cleanly and adapt to climate stresses, with nearly a dozen nations doubling their previous commitments.

The total was slightly higher than the $9.3 billion committed to the Green Climate Fund (GCF) at its first pledging conference in 2014, and came despite the absence of commitments by previous major donors such as the United States.

Climate finance analysts welcomed the stepped-up pledges – 11 of the 27 donor governments doubled their previous commitments – but said the totals were not rising as fast as the climate-change threats poor nations must deal with.

“It’s quite clear we have governments all over the world declaring climate emergencies, and far more finance from all sources is needed to adequately address the challenge,” said Joe Thwaites, a finance researcher with the U.S.-based World Resources Institute.

In its first five years the fund received total promises of a little over $10 billion.

But because the United States, under President Donald Trump, reneged on two-thirds of its initial $3 billion pledge, and currency values changed, it effectively had only $7.2 billion to spend, said Yannick Glemarec, its executive director.

The new commitments, if fulfilled, will effectively give it 70% more money to spend each year, with additional pledges likely in coming months, he said.

The funding is still a drop in the ocean compared with the estimated $3 trillion to $7 trillion a year needed to shift the world's economy onto a more sustainable and climate-friendly path, Glemarec said.

But if used to show what is possible in developing nations and cut risks for private investors there, it could help spur the much larger investments needed to make that shift, he said.

"We are very excited because we should be able to prevent a lot of climate hurt" with the additional funds, he told the Thomson Reuters Foundation.

The GCF so far has allocated about $5.2 billion to 111 projects in 99 countries.

They range from green, low-cost housing in Mongolia's polluted capital and a methane-fuelled rapid-transit bus system in Karachi to restoring climate-threatened ecosystems in Namibia.

The GCF has committed to spend half of its funding on efforts to help poorer countries adapt to climate threats, which rarely attract significant private or government finance.

'GOOD START'

Most of the donors making fresh contributions came from Europe, though New Zealand, South Korea, Japan and Canada also

committed funds, with New Zealand and South Korea pledging to double previous donations.

“This is a good start but in no way adequate to meet the needs on the ground,” said Wendel Trio, director of Climate Action Network Europe, saying he hoped more pledges would come.

The fund will remain open for additional contributions throughout its next term, GCF officials said.

Thwaites said Belgium was expected to commit to doubling its previous $100-million pledge to the fund in coming months, and Mexico had attended this week’s pledging conference in Paris too.

Gas-rich Qatar, at the U.N. Secretary-General’s climate summit in New York last month, pledged $100 million to help least-developed countries and struggling small islands cope with climate threats, Thwaites said.

The money was not intended for the GCF but shows issues affecting poorer states “are on their radar”, he said.

Stepped-up GCF funding is considered key to encouraging poorer nations to boost the ambition of their national targets to hold the line on emissions and better adapt to climate threats, finance experts said.

Both rich and poor governments are expected to improve their climate action plans – created as part of the 2015 Paris Agreement on Climate Change – by the end of 2020.

Many developing-nation plans rely heavily on external funding to meet their most ambitious goals to put in place everything from renewable energy to storm early warning systems.

Liane Schalatek, a climate finance specialist with the Heinrich Böll Foundation North America, said the new GCF pledges were positive but “probably not enough to give developing countries the confidence to significantly raise

their ambition”.

They were also insufficient to pay for the roughly $15 billion in projects already waiting in the fund’s pipeline for cash, she said in a statement.

GCF head Glemarec said a key role of the GCF’s spending was to show private investors that good investments are possible in poorer countries, and remove roadblocks to those, by setting an example or helping shift policies.

In developed countries, 98% of investment in renewable energy is private, he said, but in the least-developed countries it is under 1%, he said.

Thwaites said the GCF “comes in with money to do things the private sector isn’t yet comfortable doing. They have a demonstration effect and a de-risking effect and then you see a lot more private finance can flow in those regions”.

This is especially appropriate for projects like establishing feed-in tariffs for solar or wind power that help create a renewable energy market and give investors confidence.

The GCF has so far mobilized $2.60 in additional financing for each dollar spent, though that figure is held down by its focus on adaptation projects, which struggle to attract private finance, Thwaites said.

He said the mobilization rate was particularly respectable given the fund is working “in really difficult environments”.

In blow to US, EU pledges quick move on tax for polluting firms

The European Commission will quickly start work on a tax on foreign polluting firms, the nominee for the EU's economic and tax commissioner said yesterday, a move that could hit US companies and deepen a trade war with Washington.

In his confirmation hearing before EU lawmakers, Italy's Paolo Gentiloni also pledged "adequate" fiscal efforts to counter an economic slowdown in the eurozone that he said could be longer than currently expected.

"We will try to be very quick and effective on a carbon border tax," Gentiloni, who is due to take office in November, said.

He warned of legal and technical hurdles in devising the levy, but said work would start immediately to make sure the tax would be compatible with World Trade Organisation rules.

The tax is meant to shield European companies from competitors based in countries where climate protection schemes are not as strict.

President Donald Trump intends to pull the United States out

of the international Paris climate protection deal that aims to reduce carbon emissions.
Under the terms of the pact, that cannot happen before November4, 2020. Gentiloni's remarks come the day after the United States said it would slap 10% tariffs on European-made Airbus planes and 25% duties on French wine, Scotch and Irish whiskies, and cheese from across the continent as punishment for illegal EU aircraft subsidies..
Previous European commissions have resisted calls, led by steelmakers and traditionally protectionist France, for a carbon levy, but fresh momentum has come from increased prices in the EU Emissions Trading System (ETS), the European Union's flagship instrument for making polluters pay.
In separate comments to lawmakers, Gentiloni, a socialist former Italian prime minister, also said minimum corporate tax rates were one of the possible solutions to what he said was unacceptably excessive tax competition between EU states.
Currently, the 28 EU countries decide freely their national tax rates for firms, with the EU having limited powers only on minimum rates on sales taxes.
He reiterated the EU should move alone on an EU-wide tax on digital corporations if no deal was reached at global level in 2020.
He said he was confident, although "not fully optimistic", about an international agreement by that deadline.
In the event of no consensus, he said the European Commission would begin working on a proposal for an EU digital tax from next summer and would seek to take away from EU governments the veto power on tax matters that prevented the introduction of a digital levy in the bloc last year.
Gentiloni, who will also be in charge of the bloc's economic policy, said the EU should consider measures to favour growth at a time when the bloc faces risks of a prolonged economic slowdown.
"In this situation our economic policies should be strongly oriented towards growth and investment," he told lawmakers.
Gentiloni said the Commission's annual recommendation on the

eurozone’s fiscal stance would depend on the “seriousness and duration of the slowdown” as estimated in the next set of EU forecasts due on November 7. That could last longer than six months or a year, as currently expected, he cautioned.

In its latest economic forecasts released in July, the Commission predicted eurozone growth would slow to 1.2% this year from 1.9% in 2018, but forecast growth rebounding to 1.4% in 2020.

The bloc currently has a “broadly neutral” fiscal stance, despite pressure from some countries for more expansionary plans to counter recession risks.

The European Central Bank also backs a more expansionary fiscal stance.

The ECB loosened monetary policy further last month to lift growth and inflation, cutting its key rate to minus 0.5%, inching closer to what is the effective bottom, a level beyond which it would be counterproductive to go.

Gentiloni reiterated he would seek to use the leeway allowed by EU fiscal rules to permit governments to invest for growth and would also target a reduction of public debt.

He called for a review of EU fiscal rules that would make them simpler and urged an “ambitious” funding plan for an EU unemployment reinsurance scheme.

The bloc is currently debating whether to fund this scheme with loans or with more generous grants to states with high unemployment levels.

How to halt global warming for $300bn

The world needs to spend $50 trillion on five areas of technology by 2050 to slash emissions and meet the Paris Agreement’s goal of halting global warming, Morgan Stanley analysts wrote in a report.

To reduce net emissions of carbon to zero, the world would have to eradicate the equivalent of 53.5 billion metric tons of carbon dioxide a year, according to the report, which identified renewable energy, electric vehicles, hydrogen, carbon capture and storage, and biofuels as the key technologies that could help meet the target.

Carbon emissions from fossil fuels hit a record last year, but estimates vary of how much it would cost to meet the Paris target of keeping the global temperature rise to within 2 degrees. The International Renewable Energy Agency says $750 billion a year is needed in renewables over a decade. United Nations scientists say $300 billion spent on reclaiming degraded land could offset emissions to buy time to deploy zero-carbon technologies.

Here are Morgan Stanley's estimates for the five key technology areas and some of the companies leading the drive.

Renewables

- Renewable power generation will require $14 trillion by 2050, including investments in energy storage.
- Renewables would need to deliver about 80% of global power by then, up from 37% today, meaning an additional 11 000 gigawatts of capacity, excluding hydro-power.
- Solar energy's rapidly falling cost will make it the fastest-growing renewable technology over the coming decade with a 13% compound annual growth rate.
- Stocks that could benefit include: CGN New Energy Holdings Co., China Resources Power Holdings Co. and China Suntien Green Energy Co.

Electric vehicles

- With passenger cars currently pumping out about 7% of greenhouse gas emissions, some $11 trillion will be needed to build factories, expand power capacity and develop the batteries and infrastructure needed to switch to electric vehicles.
- With increased investment, annual EV sales could grow from 1.3 million units in 2018 to 23.2 million in 2030, lifting the total number of electric vehicles to 113 million by 2030 and 924 million by 2050.
- Some of the companies to watch: Beijing Easpring Material Technology Co., Rohm Co. and Panasonic Corp.

Carbon capture and storage

- Almost $2.5 trillion would be needed for technologies that capture carbon and store it.
- While it currently costs about $700 million to capture a million tons of carbon a year, the cost of building CCS plants is expected to drop 30% by 2050.
- With more than 200 000 megawatts of new coal-fired

generation capacity under construction, CCS is the only option to offset the emissions of these plants, Morgan Stanley says.
- The bank’s top picks include Air Liquide SA and Bloom Energy Corp.

Hydrogen

- About $5.4 trillion is needed for electrolyzers to make the gas, which can help provide clean fuel for power generation, industrial processes, vehicles and heating.
- In addition, $13 trillion would be required to increase renewable energy capacity to power the plants.
- Another $1 trillion would be needed for storage, with additional investment for transportation and distribution.
- Leading players include: Johnson Matthey and Air Liquide.

Biofuels

- Almost $2.7 trillion should go into biofuels like ethanol, which are currently mixed with petroleum products but will spread eventually to areas such as aviation.
- About 4% of global transportation fuel will be biofuel in 2030.
- Ethanol, the most-used biofuel at the moment will grow at about 3% a year, while a type of biodiesel called hydro treated vegetable oil will achieve must faster growth, quadrupling production by 2030.
- Companies invloved include Neste Corporation and Sao Martinho SA.

The clean energy fast track

The global transition from carbon-intensive fossil fuels to cleaner, more reliable renewables like wind and solar is already well underway. But the big question – for the 2020s and beyond – is how fast it will happen. A slow transition would mean that energy-sector incumbents continue to flourish, and we would all but certainly miss the emissions-reduction targets enshrined in the 2015 Paris climate agreement. But if the transition is rapid, incumbents will experience varying degrees of disruption – the price of keeping the Paris targets well within reach. As matters stand, both scenarios are possible, representing two paths that lie before us.In a new report for the World Economic Forum's Global Future Council on Energy, we and our co-authors identify four key areas that will determine which path we take. The Speed of the Energy Transition offers compelling evidence that the transition is coming fast, and that all stakeholders in the global energy system – which is to say, everyone – must start preparing.

One area where the gradual and rapid scenarios diverge is

adoption of renewable energy. When will renewables start displacing incumbents? For markets, the key moment will be when renewables make up all of the growth in energy supply, as well as all the growth in electricity supply. That, most likely, will happen in the early 2020s, long before fossil fuels lose their dominant share of total energy supply. As renewables become the leading growth industries in the energy sector, financial markets will increasingly reallocate capital accordingly.

A second area concerns innovation in energy technology, and whether growth in new applications is linear (the gradual scenario) or exponential (the rapid scenario). Solar and wind are already cheaper than fossil fuels when it comes to generating electricity, and electric vehicles are close to challenging internal-combustion-engine cars on price. The evidence suggests that the barriers to growth for EVs in the foreseeable future are soluble. Moreover, new waves of innovation are forthcoming, in the form of nascent but already viable technologies such as green hydrogen energy. Prices for renewables will most likely drop far below those of incumbent energy sources – and fast – leading to exponential growth in green energy.

A third key area is public policy. Will policymaking remain cautious, or will it become more dynamic and ambitious as new technologies create opportunities to improve the design and functioning of markets? Inertia being a powerful force, existing policies have been limited in scope. But history teaches us that there are tipping points: Once genuine change comes, it tends to be adopted rapidly across the board – as in the case of laws prohibiting smoking indoors.

Given that new technologies are already providing better solutions for consumers' energy needs, policymakers inevitably will respond to their constituents' demands. Once enough politicians recognize that the energy transition is not expensive, and will actually boost competitiveness (thereby

reducing prices), they will update the rules governing energy markets to make way for the change that is already underway.

The last key area is emerging markets, which could either follow the fossil-fueled path of developed countries, or leapfrog to newer energy technologies. Countries like China and India undoubtedly need to generate far more energy for their citizens, and there are almost 1 billion people worldwide who still lack access to electricity. But that doesn't mean emerging and developing countries have to opt for high-emission fossil fuels.

Just as mobile phones made landline telephony irrelevant in much of the developing world, increasingly affordable renewables can become the obvious first choice for generating energy.

From our perspective, the evidence clearly points to a rapid energy transition in the years ahead. The danger is that key stakeholders – whether policymakers or investors – will mistake which path we are on, and make poor decisions. If so, we will all have to bear the costs of stranded high-carbon assets and bad investments in obsolete technologies. Worse, we will have missed an early opportunity to achieve sustainability and minimize the risk of catastrophic climate.

Everyone – from innovative technology startups to energy incumbents and government policymakers – has a role to play in determining which path we take. If stakeholders recognize the rapid pace of the global energy transition already underway and embrace the change, we can still hit the Paris targets and have a planet that allows everyone to thrive.

Kingsmill Bond is the new energy strategist for Carbon Tracker. Angus McCrone is chief editor of Bloomberg NEF. Jules Kortenhorst is CEO of the Rocky Mountain Institute.

The world’s biggest offshore wind farm could be cheaper than coal

The world’s biggest offshore wind park planned off the coast of England will probably in the next decade generate power more cheaply than by burning coal.

A number of offshore wind projects won contracts to sell power at guaranteed prices in a UK auction Friday. The price of 39.65 pounds per megawatt-hour (around R740) was 31% below the level in a similar auction two years ago.

The plunge highlights how offshore wind, which only a few years ago was a niche technology more expensive than nuclear reactors, is changing the economics of energy around the world. Both utilities and, increasingly, energy majors, are planning to spend $448 billion through 2030 on an eightfold capacity increase, according to BloombergNEF.

Projects from developers including SSE Plc, Equinor ASA and Innogy SE won offshore wind power-purchase contracts that will have the capacity to generate as much as 5.5 gigawatts of power, the government said. That includes a joint SSE-Equinor project off England’s east coast to build the biggest single offshore wind park in the world.

“The auction results today show offshore wind is in line with current power prices – it is already competitive with existing fossil fuel plants, let alone new fossil fuels,” said Deepa Venkateswaran, an analyst at Sanford C. Bernstein & Co. in London. “In the next auction in 2021 we will see costs go well below that of existing fossil fuel plants.”

One of the winning areas, known as Dogger Bank, is off the coast of Yorkshire. Three projects by Equinor and SSE were approved in the zone for a total generation of 3.6 gigawatts. Another 1.4 gigawatt project developed by Innogy was also approved in the same area.

Key step

Equinor's success at the auction is a key step in its transition to becoming a broader energy company than just an oil and gas major. The state-controlled Norwegian company has a target of investing as much as 20% of its capital in new energy solutions by 2030.

"Dogger Bank, together with the recent award for Empire Wind in the US, positions Equinor as an offshore wind major," said Pal Eitrheim, Equinor's executive vice president for new energy solutions. "These projects provide economies of scale and synergies, making us an even stronger competitive force in offshore wind globally."

SSE winning capacity will accelerate its shift away from a traditional utility to an energy company focused on renewable power and grids. The Scottish company has agreed to sell its UK domestic supply business to Ovo Energy.

The agreements give the projects a guaranteed buyer through what's known as a contracts-for-difference mechanism. If the wholesale rate is lower than the set price, the government pays the developer the difference. If it's higher, the company pays it back. UK month-ahead power is trading at 42.05 pounds per megawatt-hour, down 34% this year.

Even as wind power moves away from a reliance on government subsidies, the contracts could still play an important role going forward. The guarantee helps developers secure financing and also make the assets more attractive to institutional investors who want reliable returns. The next UK auction round is set to take place in 2021.

The Crown Estate said Thursday it plans to open the first contest in a decade for sites around the British coast that could draw as much as 20 billion pounds of investment in offshore wind.

For sale

The contracts also open up a track for investors to take stakes in some of these projects. Earlier this year, Iberdrola sold a stake in its 714-megawatt East Anglia One project to Macquarie Group Ltd. for 1.63 billion pounds (R30bn). Projects that have the backing of government-supported purchase agreements are often more attractive to investors who favor the guaranteed prices.

Innogy will likely sell a stake in it 1.4 gigawatt Sofia Offshore Wind Farm development in the Dogger Bank Area, according to Richard Sandford, the company's director of offshore investment and asset management. The company hasn't decided how big of a stake it will sell, but plans to make a final decision sometime next year. SSE also said it will look to sell equity in a 454-megawatt project in Scotland that it won a contract for in the auction.

Solar, wind power are so cheap they're outgrowing subsidies

Bloomberg/San Francisco/New York

For years, wind and solar power were derided as boondoggles. They were too expensive, the argument went, to build without government handouts.

Today, renewable energy is so cheap that the handouts they once needed are disappearing.

On sun-drenched fields across Spain and Italy, developers are building solar farms without subsidies or tax-breaks, betting they can profit without them. In China, the government plans to stop financially supporting new wind farms. And in the US, developers are signing shorter sales contracts, opting to depend on competitive markets for revenue once the agreements expire.

The developments have profound implications for the push to phase out fossil fuels and slow the onset of climate change. Electricity generation and heating account for 25% of global greenhouse gases. As wind and solar demonstrate they can compete on their own against coal- and natural gas-fired plants, the economic and political arguments in favor of carbon-free power become harder and harder to refute.

“The training wheels are off,” said Joe Osha, an equity analyst at JMP Securities. “Prices have declined enough for

both solar and wind that there's a path toward continued deployment in a post-subsidy world."

The reason, in short, is the subsidies worked. After decades of quotas, tax breaks and feed-in-tariffs, wind and solar have been deployed widely enough for manufacturers and developers to become increasingly efficient and drive down costs. The cost of wind power has fallen about 50% since 2010. Solar has dropped 85%. That makes them cheaper than new coal and gas plants in two-thirds of the world, according to BloombergNEF.

"Solar got cheap," said Jenny Chase, an analyst at BNEF. "It's really that simple."

Yet for all its promise, clean energy still has a long way to go before fully usurping coal and gas. Wind and solar still only accounted for about 7% of electricity generation worldwide last year, according to BNEF. And most wind and solar projects still depend on subsides. In the US, in fact, the solar industry is pushing to extend federal tax credits that are scheduled to decline over the next few years.

And then there's the issue of round-the-clock power. Solar doesn't work at night. Wind farms go idle when breezes slack. So until battery systems are cheap enough for generators to stockpile electricity for hours at a time, renewables can't constantly provide power like coal and gas.

Perhaps nowhere is the push toward subsidy-free clean energy clearer than on arid expanses of Southern Europe. About 750 megawatts of subsidy-free clean-energy projects are expected to connect to the grid in 2019 alone, across Spain, Italy, Portugal and elsewhere — enough to power about 333,000 households, according to Pietro Radoia, an analyst at BNEF.

"The cheapest way of producing electricity in Spain is the sun," Jose Dominguez Abascal, the nation's secretary of state for energy, said last year.

The road to subsidy-free renewables wasn't easy for Spain. A decade ago, it offered developers a lavish feed-in tariff, prompting an uncontrolled boom that strained the national treasury. Spain slashed incentives and now has a hands-off energy policy.

China, the world’s largest renewable energy market, also propped up wind and solar for years. Now it’s shifting toward a more market-driven approach. Earlier this year, officials announced a plan to develop 20.8 gigawatts of renewable projects that can only profit from selling electricity into grids at prices equal to or less than coal. Plus, most wind farms built on land — as opposed to in the ocean — won’t be eligible for subsidies after 2021.

The picture is less clear in the US. Nearly every American wind and solar project remains eligible for subsidies through federal tax breaks, which are scheduled to decrease or phase out altogether over the next few years. Plus, dozens of states have renewable-energy quotas, forcing utilities to buy a certain amount of wind and solar.

Still, they’re starting to compete on their own. The proof is in the sales agreements. For years, clean-energy developers needed 20- or 25-year power-purchase contracts to ensure a return on investment. Now they’re building wind and solar farms with agreements for 15 years or less — with the expectation that projects will compete against gas- and coal-fired plants in wholesale markets after the deals conclude.