



## **MINISTERE DES ARMEES**

### **Observatoire de la sécurité des flux et des matières énergétiques**

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# Table des matières

Actualités énergétiques régionales	3
Afrique du Nord – Moyen Orient	3
Arctique	3
Méditerranée Orientale	4
Europe	4
Asie	5
Afrique	7
Autres	9
Stratégies d'entreprises	10
Stratégies	10
Investissements et acquisitions	12
Juridique et institutionnel	13
Innovations technologiques	15
Energies renouvelables et biocarburants	15
Stockage d'électricité et batteries	15
Hydrogène	16
Nucléaire	17
CCS	18
Autres technologies	18

## Actualités énergétiques régionales

### Afrique du Nord – Moyen Orient

#### Iran ready to synchronise its power grid with Azerbaijan, Russia

**Date:** 08/12/2021

Azerbaijan, Russia, Iran, CIS, CIS, Middle-East, BRICS, G8, Emerging markets, Electricity, Trade, Projects, Supply, Interconnection (power), Power grids

Iran has completed studies on electricity cooperation with Azerbaijan and Russia (project announced in 2019) and is ready to start synchronizing its power network with these countries. Iran, whose power grid has been synchronized with that of Iraq since 2019, has long been cooperating with Azerbaijan in the water and energy sectors.

**Source(s):** [Teheran Times](#)

### Arctique

#### Moscow eyes ban on foreign ships carrying Russian fuel via Northern Sea Route

**Date:** 07/12/2021

Russia, CIS, BRICS, G8, Emerging markets

Russia is considering banning foreign vessels from shipping Russian energy cargoes via the Northern Sea Route, as well as from icebreaking and coastal navigation. The step, proposed by the Industry and Trade Ministry, would restrict vessels built outside Russia on the Northern Sea Route. Activities restricted to Russian-built vessels would include transporting Russian-produced oil, gas, gas condensate and coal along the route, as well as icebreaking services, hydrotechnical and underwater engineering work. Russia hopes the Northern Sea route to start year-round shipping in 2022 or 2023 and to become a major shipping lane.

**Source(s):** [Reuters](#)

#### Russia, India considering joint development of Arctic, Far Eastern hydrocarbon fields

**Date:** 03/12/2021

Russia, CIS, BRICS, G8, Emerging markets, Crude oil, Natural Gas, Oil

Russia and India are exploring the possibilities of the joint development of hydrocarbons on the Arctic shelf and in Russia's Far East. Exports of Russian hydrocarbons to India are expanding, with the two countries' mutual interest in the implementation of joint LNG projects persisting.

**Source(s):** [TASS](#)

## Russia's 19.8 Mt/year Arctic LNG 2 project secures loans worth US\$10.8bn

**Date:** 01/12/2021

BRICS, G8, Emerging markets, CIS, Russia, Natural Gas, LNG, Projects, LNG facilities, LNG liquefaction

The Arctic LNG 2 plant has signed loan agreements with foreign and Russian banks worth €9.5bn, securing necessary external financing for the project. Chinese financial institutions, including the China Development Bank and the Export-Import Bank of China, have signed credit facility agreements totalling up to €2.5bn. Financial institutions from the OECD member countries including the Japan Bank for International Cooperation (JBIC) and other lenders insured by export credit agencies have signed credit facility agreements totalling up to €2.5bn. Finally, the financing to be provided by the syndicate of Russian banks will total €4.5bn. The 19.8 Mt/year Arctic LNG 2 project is owned by Novatek (60%), Total, CNOOC, CNPC and Japan Arctic LNG (10% each). The export plant will consist of three liquefaction trains of 6.6 Mt/year capacity each. The first train should be commissioned in 2023, while trains 2 and 3 are expected to enter commercial operation in 2024 and 2025, respectively. The LNG production will be allocated to the project's shareholders, in proportion to their respective ownership stakes in the project.

**Source(s):** Novatek, Reuters

## Méditerranée Orientale

### Cyprus awards an offshore oil and gas block to ExxonMobil and QatarEnergy

**Date:** 06/12/2021

Europe, Cyprus, Oil, Oil sands, Policy, Tender, Companies, ExxonMobil

Cyprus has awarded the right to explore for oil and gas in the country's offshore block 5 to ExxonMobil and QatarEnergy. Block 5 will be operated by ExxonMobil, which will own 60% of the rights, and QatarEnergy will hold the remaining 40%. The consortium already holds exploration rights for the adjacent block 10, the Mediterranean island's largest find to date, with estimated resources of 5-8 tcf (142-226 bcm) of natural gas. Partners plan to restart drilling activities to confirm the massive gas discovery made in early 2019. Cyprus has currently 500 bcm of gas resources and 257 mbl of oil resources but does not produce hydrocarbon.

**Source(s):** Financial Mirror, Argus Media

## Europe

### Gas filling starts in 2nd line of Nord Stream 2 gas pipeline (Russia-Germany)

**Date:** 21/12/2021

Germany, Russia, Europe, CIS, BRICS, G8, Emerging markets, Natural Gas, Projects, Interconnection (gas), Gas pipeline

Nord Stream 2 has started filling gas into the second 27.5 bcm/year string of the 55 bcm/year Nord Stream 2 gas pipeline between Vyborg (Russia) and Greifswald (Germany), and pre-commissioning activities on the second string have been completed. The construction of the €9.5bn Nord Stream 2 gas pipeline started in May 2018 and was completed in September 2021. The project, which aims at doubling the throughput of the current Nord Stream gas pipeline from 55 bcm/year to 110 bcm/year, is developed by Gazprom (50%), Uniper, Shell, OMV, Wintershall and Engie (10% each). The project is yet to receive an operating licence from the German energy regulator (BNetzA) and from the European Union, in a context of political tensions over Ukraine; the BNetzA expects full certification of the project in the second half of 2022 at the earliest.

**Source(s):** Nord Stream 2, Reuters

## Croatia commissions a 156 MW wind plant built by China's Norinco

**Date:** 09/12/2021

Europe, Croatia, Electricity, Renewables, Wind, Onshore, Projects, Power plants

Croatia has officially inaugurated the 156 MW Senj wind project on the Adriatic coast, which is expected to produce about 530 GWh/year. The project was built by China's Norinco International, a subsidiary of the Chinese state-owned defence group Norinco. In 2017, Norinco International purchased a 76% stake in the project and obtained the right to construct and operate it for 25 years. Wind accounts for 18% of Croatia's installed capacity, with 856 MW (end of 2020).

**Source(s):** [XinhuaNet](#)

## Asie

### Russia and China strengthen energy cooperation with Power of Siberia-2 gas pipeline progress

**Date:** 21/12/2021

Russia, China, Mongolia, CIS, Asia, BRICS, G8, Emerging markets, Natural Gas, Projects, Interconnection (gas), Gas pipeline, Policy

China and Russia are promoting further energy cooperation, to defend energy security and to counter the challenges of global climate change. During the 3rd Russian-Chinese Energy Business Forum (November 2021), China highlighted the vast potential for the development of Chinese-Russian relations in energy matters. Natural gas has emerged as one of the main areas of economic cooperation between the two countries, with Chinese companies acquiring stakes in Russian LNG projects in 2013 (30% in Yamal LNG and 20% in Arctic LNG) and with the 2014 agreement to build the Power of Siberia gas pipeline delivering 38 bcm/year of Russian gas to China (project launched in 2019 with full capacity in 2025). In addition, the Power of Siberia-2 gas pipeline project, which could deliver up to 50 bcm/year of Russian gas to China, has accelerated, as the optimal route, length and other parameters have already been determined and the feasibility study should be completed in the next few weeks. An agreement on the exact route through Mongolia ("Soyuz Vostok" section) was signed in October 2021. Russia and China still must agree on pricing before construction can begin (as of 2024) but the two sides are close to signing an agreement. The long-awaited Power of Siberia-2 gas pipeline would significantly boost Russian gas exports to China, which has faced severe energy shortages this year and aims to boost its gas consumption. It would also reduce Moscow's dependence on European markets and improve its leverage when talking to European customers, as the gas pipeline would draw on the very same gas fields the company uses to supply the European market (up to 1/3 of gas could be diverted to China), offering Russia an alternative route to ship its gas, particularly at a time of heightened tension between Russia and the West. Moreover, the Power of Siberia-2 gas pipeline would reduce China's reliance on maritime routes controlled by US warships.

**Source(s):** [TASS](#), [Nikkei Asia](#), [TASS](#)

### S. Korea, Russia to bolster cooperation in nuclear energy sector

**Date:** 08/12/2021

Russia, South Korea, CIS, Asia, BRICS, G8, Emerging markets, Nuclear, Electricity

South Korea and Russia have agreed to expand their cooperation in developing reliable atomic technology, including the safe dismantling of nuclear power plants, and developing technology for the disposal of spent fuel. The two countries have discussed various ways to expand ties in research in such areas as hydrogen energy and developing small modular reactors.

**Source(s):** [Yonhap News Agency](#)

## Russia's Rosneft and Indian Oil sign 2022 crude supply deal

**Date:** 06/12/2021

Russia, India, CIS, Asia, BRICS, G8, Emerging markets, Crude oil, Oil, Trade, Supply

Rosneft has signed an agreement to supply refiner Indian Oil Corp (IOC) with up to 2 Mt of crude oil in 2022. The contract, which confirms the strategic nature of long-term partnership between Rosneft and IOC, follows several supply agreements between the companies in recent years. IOC, which is a shareholder in several Rosneft production projects in Russia, including Vankorneft and Taas-Yuryah, is also seeking collaboration with Gazprom Neft and the Russian petrochemicals company SIBUR.

**Source(s):** [Reuters](#)

## TAPI pipeline project and stakeholder interests: Business, geopolitics or both?

**Date:** 06/12/2021

Turkmenistan, Afghanistan, India, Pakistan, CIS, Asia, Asia, Asia, BRICS, Emerging markets, Natural Gas, Projects, Interconnection (gas), Gas pipeline

Turkmenistan and Afghanistan are seeking to revive the Turkmenistan–Afghanistan–Pakistan–India (TAPI) gas pipeline project, a 1,735 km pipeline delivering gas from the Galkynysh field in southern Turkmenistan to Fazilka in Punjab (India), which was proposed in 2008 but frozen since then (construction started and suspended in Afghanistan in 2018). The up to US\$10bn project is considered by the head of Pakistani diplomacy as strategically important for the entire macro-region (despite tensions between India and Pakistan) and it would improve energy security in a context of rising gas demand. It would also provide dividends from transit nations and would be crucial for the Taliban, resulting in up to US\$1bn/year in revenues from the exploitation of the pipeline. Turkmenistan has invited Turkey to join the project, without success so far. Saudi Arabia, which has already invested twice in the project, supports the project that is estimated to have a positive impact on the development of the whole region. Finally, Russia, which is itself strategically interested in increasing gas deliveries to India, has also expressed support for this seemingly rival energy project: Russia could normalise ties with the Taliban in Afghanistan, and it could keep its dominant position on the European gas market, by ensuring that Turkmenistan's gas exports are directed to South Asia and not to Europe via the long-proposed Trans-Caspian Pipeline.

**Source(s):** [Jamestown Foundation](#)

## What Chinese dams in Laos tell us about the Belt and Road Initiative

**Date:** 03/12/2021

Lao PDR, Asia, Emerging markets, Large-hydro, Hydro, Renewables, Electricity, Projects, Power plants

China's participation in hydropower projects along the Mekong in Laos under the Belt and Road Initiative is a way to develop inland provinces, especially Yunnan, and to improve its energy security. Indeed, the Bridgehead Strategy aims to improve the economic development of Yunnan by pushing for increased construction of connective infrastructure and financial ties between the province and Southeast Asia. In addition, Chinese hydropower investments in Laos will export a significant amount of electricity into China. In September 2020, China Southern Power Grid acquired a majority stake in the Electricité du Laos (EDL) and took control of the Laotian power grid. In March 2021, Laos allowed Chinese companies to operate and control key infrastructure within its borders for the next 25-30 years. China's planned dams in Laos are an instrument for local development, but also regional integration through energy generation.

**Source(s):** [The Diplomat](#)

## Afrique

### China-Africa declaration on climate change: Old wine in new bottles?

**Date:** 16/12/2021

Africa, CO2 emissions, Policy

In November 2021, China and 53 African countries announced their visions to strengthen cooperation in areas such as green energy, agriculture, forestry, and other low-carbon infrastructure projects. This joint declaration is expected to have some profound implications for how China will engage with Africa and implement its international development strategy in the coming years.

**Source(s):** Italian Institute for International Political Studies

### Grant agreement signed to study 100 MW expansion of Senegal's first wind farm

**Date:** 15/12/2021

Senegal, Africa, Onshore, Wind, Renewables, Electricity, Projects, Investments, Power plants

The United States International Development Finance Corporation (DFC) has signed a grant agreement to finance a feasibility study for a 100 MW extension to the 159 MW Parc Eolien Taiba N'Diaye (PETN) wind park in Senegal. Project developer Lekela was also recently awarded a grant from the U.S. Trade and Development Agency to fund a feasibility study in partnership with Senelec for Senegal's first grid-scale battery electric storage system, which will be located at PETN.

**Source(s):** Lekela

### MCC, Gambia sign \$25 million solar investment program

**Date:** 14/12/2021

Gambia, Africa, Renewables, Electricity, Investments, Power plants

The Gambian government has signed a US\$25m investment program deal with the U.S.-based Millennium Challenge Corporation (MCC) to expand solar developments across the country. The MCC already has a notable presence in Africa and has demonstrated its commitment to improving electrification through agreements such as the Gambian investment program; signed Memorandum of Understandings with the governments of Burkina Faso and Côte d'Ivoire; and cooperative agreements with the West African Power Pool – all signed in 2021.

**Source(s):** Energy Capital and Power

## Chevron signs agreement with Equatorial Guinea for offshore block

**Date:** 13/12/2021

Africa, Equatorial Guinea, Oil, Oil sands, Companies, Projects, Chevron

Chevron has signed a production-sharing agreement with the government of Equatorial Guinea for Block EG09, located in the Douala Basin on the border of Cameroon. The agreement grants Chevron 80% ownership, with the national oil company of Equatorial Guinea GEPetrol holding the remaining 20%. Block EG09 was awarded to Noble Energy and GEPetrol during the country's 2019 bid licensing round; Noble Energy was later taken over by Chevron (transaction completed in October 2020 for US\$13bn). In February 2021, Chevron achieved first gas flow from the Alen gas monetisation project. The project consists of a 70 km pipeline with a capacity of 950 mcf/d (9.8 bcm/year) that allows gas from the Alen field, located in the Douala Basin offshore Equatorial Guinea, to be processed through onshore existing facilities.

**Source(s):** [African Energy Chamber](#), [Reuters](#)

## Energy China Consortium will build a 150 MW gas plant (Sierra Leone)

**Date:** 09/12/2021

Sierra Leone, Africa, Gas-fired power gen., Thermal, Electricity, Companies, Capacities, Projects, Supply, Power plants

The Chinese state-owned energy conglomerate China Energy Construction International Group and the Chinese construction and engineering company Gezhouba Energy Heavy Industry have formed a consortium with Sierra Leone Nehlsen Ghana energy company and signed a US\$137m EPC contract for the construction of the 150 MW Sierra Leone gas-fired power plant in the Freedom area in Sierra Leone. The project is meant to solve the serious power shortage issues in Sierra Leone's capital area, and the lack of power supply in most areas.

**Source(s):** [INF](#)

## How can China help South Africa achieve a just transition?

**Date:** 03/12/2021

Africa, Coal-fired power gen., Renewables, Thermal, Electricity, Electricity, Policy

China's halt to overseas coal power construction could result in a new era for China-Africa cooperation on renewables. In a historically coal-reliant country like South Africa, where private capital tends to lead on developing renewables, there are high hopes for Chinese firms.

**Source(s):** [China Dialogue](#)



## Autres

### To 'green' the Belt and Road, China needs to set clear renewable energy targets

**Date:** 21/12/2021

China, Asia, BRICS, Emerging markets, Renewables, Electricity, Projects, Investments, Power plants, Power grids

"Green" and "low-carbon" development have been buzzwords that frequently appear in bilateral or multilateral agreements around the world. China's overseas finance deals are no exception. But despite frequent invocation, there are still no clear policy standards or targets for power capacity, investment, or policy. China leaving coal is no clear guarantee that it will be a renewable energy leader; there is yet work to be done.

**Source(s):** [The Diplomat](#)

### OPEC+: Locked in a Russia-US-Saudi triangle

**Date:** 08/12/2021

World, Crude oil, Oil, Production, Supply

The events of recent months, including a series of critical statements by international players about the reluctance of OPEC+ to raise output beyond its established quotas, have clearly demonstrated the changing realities in the oil market. In addition to global uncertainty, the dynamics between Saudi Arabia, Russia, and the U.S., as well as the actions of Asian oil consumers, have become other key factors shaping the cartel's behaviour.

**Source(s):** [Middle East Institute](#)

## Stratégies d'entreprises

### Stratégies

#### Venture Global LNG (US) signs LNG sales agreements with CNOOC (China)

**Date:** 23/12/2021

China, Asia, BRICS, Emerging markets, LNG, Natural Gas, Trade, Contract, Supply, Companies, BP

The US LNG group Venture Global LNG has signed a 20-year Sales and Purchase Agreement (SPA) with CNOOC Gas and Power, under the terms of which Venture Global LNG will supply 2 Mt/year of LNG from its Plaquemines LNG export project in Plaquemines Parish, Louisiana (United States) to CNOOC on a free on board (FOB) basis. The proposed 20 Mt/year (27 bcm/year) Plaquemines LNG export terminal will be developed in two 10 Mt/year stages, with a phased operational startup in mid-2023 and full operations by mid-2024. In addition, the US LNG producer will sell 1.5 Mt of LNG from its Calcasieu Pass LNG project (US) to CNOOC over a shorter period; the 10 Mt/year Calcasieu Pass LNG project is currently under construction and expected to be commissioned in 2022. In October 2021, Venture Global LNG had already signed LNG supply agreements with Chinese companies, to deliver 4 Mt/year of LNG from Plaquemines LNG to Sinopec over a 20-year period and another 1 Mt/year of LNG from Calcasieu Pass LNG to Unipecc (a subsidiary of Sinopec) over a 3-year period starting in March 2023. In addition, BP has signed an LNG sale and purchase agreement with a subsidiary of China's State Power Investment Corp (SPIC) to deliver 0.2 Mt/year of regasified LNG over a 10-year period starting in 2023. LNG will be regasified at the Guangdong Dapeng LNG terminal and will be delivered to the Guangdong province. BP had already signed a 10-year LNG supply agreement with the Chinese city-gas distribution company Shenzhen Gas.

**Source(s):** Venture Global LNG, NefteGaz

#### Portugal's EDP, China Three Gorges change partnership terms

**Date:** 10/12/2021

Portugal, Europe, Electricity, Companies, China Three Gorges Power (CTGPC), EDP

Portugal's main utility EDP and its largest shareholder, China Three Gorges (CTG) have changed the terms of their 10-year strategic partnership, which focused on joint growth in Latin America, to give each company greater flexibility and autonomy to grow globally, as EDP's renewable subsidiary is accelerating its growth in Asia with the acquisition of Sunseap.

**Source(s):** Reuters

#### Russia could end Gazprom's monopoly over piped gas exports

**Date:** 08/12/2021

BRICS, G8, Emerging markets, CIS, Russia, Natural Gas, Companies, Supply, Gazprom, Rosneft

The government of Russia will work out proposals by 1 March 2022 for Rosneft to supply 10 bcm of pipeline gas exports to Europe. Gazprom currently holds monopoly rights for gas exports via pipelines but two of the pipeline routes, via Ukraine and the Yamal pipeline, are underused; Rosneft could thus secure export rights through these gas pipelines. Opening Gazprom's pipeline export monopoly has long been under consideration, with other oil and gas companies authorised to export LNG in December 2013. In 2020, Gazprom's natural gas exports to Europe (including Turkey) decreased by 12% from 199 bcm to 175 bcm, including 135.7 bcm to western Europe. Germany remained Gazprom's biggest market in western Europe (46 bcm in 2020, -14% on 2019), followed by Italy (21 bcm, -6%), Turkey (16 bcm) and Austria (13 bcm). The group retained its leading position in Central Europe with 39.1 bcm of gas exports, including 9.7 bcm to Poland, 8.6 bcm each to Hungary and Slovakia and 5 bcm to Czechia.

**Source(s):** TASS, Reuters

## NOVATEK and RWE join in on LNG supply and decarbonisation

**Date:** 07/12/2021

Russia, CIS, BRICS, G8, Emerging markets, LNG, Natural Gas, Companies, Novatek, RWE

Novatek, Russia's natural gas producer, and RWE Supply and Trading have signed a Memorandum of Understanding (MoU) to cooperate on LNG supply and decarbonisation; Novatek will supply low-carbon ammonia and hydrogen from its planned project Obsskiy Gas Chemical Complex to RWE. There is also a possibility of long-term LNG supplies from the Arctic LNG 2 and other projects of the Russian company.

**Source(s):** Offshore Energy

## A new chapter in U.S.-China LNG relations

**Date:** 06/12/2021

United States, China, America, Asia, BRICS, G8, Emerging markets, LNG, Natural Gas, Trade, Supply

The United States and China have always had a complicated relationship when it comes to LNG. But after several false starts, and a few twists, the United States is now China's second-largest LNG supplier, and several Chinese companies have signed up to buy US LNG on a long-term basis. This is a major turn and a sign that the commercial logic tying these two geopolitical rivals together is strong and will persist alongside and, sometimes, despite of their broader political animosity.

**Source(s):** CSIS

## Russia's Novatek, PetroVietnam sign LNG, power deal

**Date:** 03/12/2021

Vietnam, Asia, Emerging markets, LNG, Electricity, Natural Gas, Companies, Novatek, Petrovietnam

Russian producer Novatek has signed an agreement with Vietnam's state-owned PetroVietnam Power (PV Power) to develop LNG infrastructure projects in Vietnam to meet its growing electricity demand. It is also in discussions with the firm to supply LNG from its projects to Vietnam. The Russian group had signed a preliminary agreement with Vietnam's Ninh Thuan province in 2019 to build an LNG-to-power project, including an LNG regasification terminal and new gas-fired power plants. In December 2020, the US project developer Energy Capital Vietnam (ECV) and the Swiss trading firm Gunvor formed a joint venture to trade LNG and deliver supplies to Vietnam: Gunvor will supply the LNG to the joint venture under a long-term supply agreement to feed ECV's planned 3.2 GW LNG-to-power project in Mui Ke Ga, Binh Thuan province.

**Source(s):** Argus Media

## Investissements et acquisitions

### Ecuador's controversial and costliest hydropower project prompts energy rethink

**Date:** 16/12/2021

Ecuador, America, Emerging markets, Hydro, Large-hydro, Renewables, Electricity, Renewables, Electricity, Projects, Power plants

Since beginning operations in 2015, the 1.5 GW Coca Codo Sinclair hydropower plant worth US\$3.2bn that was built by China's Sinohydro, backed by a US\$1.7bn loan from The Exim Bank of China, has been plagued by technical problems and controversy and runs below capacity, forcing Ecuador to rely on other energy sources.

**Source(s):** Dialogo Chino

### Chevron extends Block 0 concession in Angola

**Date:** 10/12/2021

Angola, Africa, Emerging markets, Crude oil, Oil, Companies, Chevron

The US energy group Chevron has announced the extension of its concession for Block 0 offshore Angola. Under the new agreement, Chevron will extend the concession for 20 years, with its wholly owned subsidiary CABGOC as the operator with a 39.1% stake. Other partners include Sonangol (41%), TotalEnergies (10%) and Eni (9.8%).

**Source(s):** Energy Capital and Power

### ConocoPhillips sells its oil and gas assets in Indonesia to MedcoEnergi

**Date:** 10/12/2021

Emerging markets, Asia, Australia, Indonesia, Oil, LNG, Natural Gas, Companies, Acquisition/sale, ConocoPhillips

ConocoPhillips has entered into an agreement to sell its oil and gas assets in Indonesia, which produced about 50,000 boe/d in 2020, to MedcoEnergi for a total consideration of US\$1,355m. ConocoPhillips indirectly owns a 54% stake in the Indonesia Corridor Block Production Sharing Contract (PSC), which has two oil fields and seven gas fields, and a 35% shareholding interest in Transasia Pipeline Company. Once completed in early 2022, the transaction will boost MedcoEnergi's oil and gas production to 155,000 boe/d (+40% from its current production capacity). Meanwhile, ConocoPhillips has announced that it is exercising its preempting right to acquire an additional 10% stake in the Australia Pacific LNG (APLNG) project in Australia from Origin Energy for US\$1,645m. The acquisition will close in the first quarter of 2022 and will raise the group's stake in APLNG from 37.5% to 47.5%.

**Source(s):** ConocoPhillips, MedcoEnergi, Reuters

## US private equity fuels African oil and gas development

**Date:** 02/12/2021

United States, Africa, America, G8, Oil, Natural Gas, Companies, Investments

The United States has already emerged as a leader in financing Africa's exploration and production (E&P), with US private equity-backed operators commanding frontier and mature plays in Africa's largest oil and gas markets. US private equity firms are financing US oil and gas companies such as Kosmos Energy (active in West Africa, with assets in Ghana and Equatorial Guinea, along with its Greater Tortue Ahmeyim gas development offshore Mauritania and Senegal) or Assala Energy (mainly active in Gabon). While private-equity activity on the continent is on the rise, to date, the majority of deals have been confined to established hubs such as South Africa, Nigeria and Egypt. However, smaller markets are seeing a rise in activity, including Tunisia, Senegal, Mali, Ghana and Rwanda, after adopting more investor-friendly regulatory frameworks that eliminated significant bureaucratic red-tape.

**Source(s):** Energy Capital and Power

## Uranium in Namibia: Yellowcake Fever

**Date:** 01/12/2021

Namibia, Africa, Uranium, Nuclear, Electricity, Production, Supply

Les revenus miniers sont le moteur de la performance économique de la Namibie. Après des années de dépression du marché mondial de l'uranium, la production d'uranium de la Namibie a augmenté et le pays est désormais le quatrième producteur d'uranium au monde. Le moteur de cette hausse est la Chine, qui a besoin de sécuriser son approvisionnement en uranium. Les investissements des entreprises chinoises sont désormais majoritaires dans les deux mines les plus productives. C'est ce qui fait que la production d'uranium en Namibie est en expansion et devrait se développer dans les années à venir, à mesure que la mine de Husab atteindra sa pleine capacité.

**Source(s):** IFRI

## Juridique et institutionnel

### À Vienne, un bilan très mitigé des discussions sur le nucléaire iranien

**Date:** 18/12/2021

Iran, Middle-East, Emerging markets, Nuclear, Electricity

Une nouvelle séance de discussions sur le nucléaire iranien s'est tenue à l'Agence Internationale de l'Énergie Atomique (AIEA) à Vienne afin de faire revivre l'accord de 2015 qui garantissait le caractère civil du programme nucléaire iranien, en échange de la levée des sanctions. Quelques progrès semblent avoir été effectués (reprise de la surveillance par caméras de l'un des sites du programme nucléaire iranien), mais sans dissiper toutes les inquiétudes.

**Source(s):** RFI

## US bans financing abroad projects with GHG intensity >250 gCO<sub>2</sub>/kWh

**Date:** 15/12/2021

G8, America, United States, Electricity, Thermal, Gas-fired power gen., Coal-fired power gen., Oil-fired power gen., Policy, Investments, Power plants

The US Government has ordered national government agencies to stop immediately financing carbon-intensive projects overseas and instead focus on deploying clean energy technologies. The policy defines the "carbon-intensive" projects as projects with GHG intensity above a threshold lifecycle value of 250 gCO<sub>2</sub>/kWh and includes coal, oil or gas/petrol. In addition, the policy bans any US government to finance overseas coal projects which do not (or only partially) capture CO<sub>2</sub> emissions. Some carbon-intensive projects are exempted if they are deemed to be needed for national security or geostrategic reasons, or they are crucial to deliver energy access to vulnerable areas.

**Source(s):** Reuters, The Hill

## Le Kremlin justifie son veto contre une résolution sur le réchauffement climatique à l'ONU

**Date:** 14/12/2021

World, CO<sub>2</sub> emissions, Policy

Le Kremlin a défendu son veto contre une résolution sur le réchauffement climatique au Conseil de sécurité des Nations unies, estimant que ce texte risquait de nuire au développement du pays. Le texte, proposé par le Niger et l'Irlande, a eu la faveur de 12 membres du Conseil, la Russie et l'Inde votant contre et la Chine s'abstenant. Sans l'opposition russe, elle aurait été donc adoptée.

**Source(s):** Connaissance des Energies

## Le gazoduc Nord Stream 2 ne sera pas autorisé à fonctionner en cas d'« escalade » en Ukraine

**Date:** 12/12/2021

Germany, Russia, Ukraine, Europe, CIS, BRICS, G8, Emerging markets, Natural Gas, Trade, Supply, Interconnection (gas), Gas pipeline

Le gouvernement allemand a annoncé que le nouveau gazoduc germano-russe controversé Nord Stream 2 ne serait pas autorisé à fonctionner en cas de nouvelle "escalade" en Ukraine, en vertu d'un accord de principe conclu entre l'Allemagne et les Etats-Unis, au moment où les Occidentaux craignent une invasion de l'Ukraine par les troupes russes. Mi-novembre, l'autorité allemande de régulation de l'énergie avait suspendu la procédure de certification de Nord Stream 2 - dont la construction est terminée - en demandant au consortium basé en Suisse, et chargé de son exploitation, de créer une société de droit allemand. Les États-Unis et plusieurs pays d'Europe de l'Est, à commencer par la Pologne, s'inquiètent d'une trop grande dépendance de l'Europe à l'égard de la Russie. Par ailleurs l'Ukraine, jusqu'ici un des grands pays de transit du gaz russe vers l'Europe, redoute de faire les frais de ce projet qui la contourne et d'en être économiquement et diplomatiquement affaiblie.

**Source(s):** Connaissance des Energies

## Innovations technologiques

### Energies renouvelables et biocarburants

#### DFC deal to boost U.S. solar industry and strengthen clean energy supply chains

**Date:** 10/12/2021

United States, America, G8, Renewables, Electricity, Policy

A constant refrain in Washington is that the United States must compete with China in third countries by offering a more compelling alternative than China, especially in infrastructure. A recent deal (the US International Development Finance Corporation (DFC) lending up to US\$500m to First Solar for building a solar manufacturing facility in India) shows what is possible in terms of competing with China and building resilient supply chains for clean energy.

**Source(s):** CSIS

#### The U.S. solar industry strategy

**Date:** 01/12/2021

United States, America, G8, Solar, PV, Renewables, Electricity, Renewables, Electricity

The United States has successfully deployed solar energy, but its solar manufacturing has struggled against Chinese imports and an inability to coordinate investments and integration across the entire solar supply chain. The Biden administration sees solar as a priority for meeting its ambitious climate targets and is supporting efforts at technological diversification, especially in thin-film solar, in part to counter Chinese manufacturing dominance. The proposed Build Back Better agenda includes a raft of policies that will likely provide a significant demand-side signal for local solar manufacturing, as well as some dedicated tax incentives and public financing initiatives that could lead to more investment in the domestic manufacturing supply chain.

**Source(s):** CSIS

### Stockage d'électricité et batteries

#### Local authority approves the proposed 2 GW Westside Canal BESS (US)

**Date:** 16/12/2021

G8, America, United States, Projects, Electricity storage

The Board of supervisors of Imperial County in California (United States) have granted through a conditional use plan for the up to 2 GW Westside Canal BESS proposed by ConEdison Development. The storage system is expected to host both lithium-ion and flow battery systems. The project is expected to be built in phases over 10 years. Each phase could range between 25 MW and 300 MW, depending on the market development and opportunities for securing long-term contracts. The BESS project will be interconnected to the grid at Imperial Valley Substation, a strategically important location, which sends power out within California and into neighbouring states. The project aims to increase the local utilisation of existing and new solar energy generation.

**Source(s):** Board of supervisors of Imperial County, Board of supervisors of Imperial County, Board of supervisors of Imperial County, Board of supervisors of Imperial County

## The United States' industrial strategy for the battery supply chain

**Date:** 14/12/2021

United States, America, G8, Electricity, Technology, Electricity storage

The United States views the battery industry as a core pillar of economic competitiveness, decarbonization, and national security. Since it lags peers like Europe and China, the United States has articulated several elements of a strategy to catch up and ultimately lead in batteries. The US battery strategy rests on both demand- and supply-side measures, which could reshape the US battery sector over the next decade. The United States has no place-based elements in its battery strategy, but the intersection with the auto industry is clear. US performance in batteries depends on how quickly the US auto industry shifts to electrification and succeeds in deepening its supply chains with domestic manufacturing.

**Source(s):** CSIS

## Hydrogène

### A new hydrogen world: Geotechnological, economic, and political implications for Europe

**Date:** 18/12/2021

European Union, Hydrogen

The global implications of a switch to hydrogen are far-reaching, as hydrogen will, at least in part, gradually replace the oil and gas trade, and new international trade flows will emerge. In addition, hydrogen will transform the industry, and its use will have disruptive effects that reshape the economic geography. Policymakers are being called upon to make far-reaching, fundamental decisions that will decisively shape the contours of the hydrogen world. Germany and the European Union should consider the geo-economic and political consequences when setting the course.

**Source(s):** Stiftung Wissenschaft und Politik

## Chinese companies are ramping-up their electrolyzers production

**Date:** 16/12/2021

BRICS, Emerging markets, Asia, China, Hydrogen, Companies, Technology

According to a BNEF study, Chinese companies, including major solar manufacturers such as Longi Green Energy Technology and Sungrow Power Supply, are ramping up their production and investments in electrolyzers. The manufacturers are slashing prices, production costs as well as developing massively new installations, as they had operated to become leaders on the solar market. The Chinese manufacturer Longi has announced its plan to build 1.5 GW of electrolyzers by the end of 2022 (500 MW currently), and State Power Investment Corporation (SPIC) aims to build 10 GW of electrolyzers by 2027. Over 1/3 of the Chinese state-owned companies are currently making plans for hydrogen production, distribution and utilisation, driven by pressure to cut emissions, and the increasing cost of carbon. China would account for over 60% of the global electrolyser installations in 2022, while the China Hydrogen Alliance estimates that hydrogen could make up 20% of China's energy mix by 2060. Currently, the price of green hydrogen costs at least US\$3.22/kg in China (with green hydrogen price nearly double that of coal-based grey hydrogen). In 2020, grey hydrogen accounted for more than 63% of the national hydrogen market in China, while green hydrogen's share only reached 1.5%. To continue to cut costs, the manufacturers are waiting for a national hydrogen plan and new subsidy program for green hydrogen.

**Source(s):** Bloomberg, SP Global



## Climat: l'UE veut créer un marché de l'hydrogène et sévir contre le méthane

**Date:** 15/12/2021

European Union, Hydrogen, Policy

L'Union Européenne, qui vise une capacité d'électrolyse de 40 GW d'ici 2040, a proposé de créer un marché européen de l'hydrogène, de durcir les restrictions sur les émissions de méthane et d'encourager le stockage de CO<sub>2</sub> dans les terres agricoles. Selon ces propositions, qui devront être approuvées par les Etats membres et les eurodéputés, ce nouveau marché de l'hydrogène reposerait sur un système de certification, des normes techniques et réglementaires communes pour faciliter les échanges. De plus, Bruxelles voudrait que les contrats européens à long terme d'achat de gaz naturel fossile "ne soient pas prolongés au-delà de 2049", mais, face aux récentes tensions sur les approvisionnements énergétiques, le texte autorise les Etats à procéder à des achats groupés volontaires de gaz pour disposer de stocks stratégiques.

**Source(s):** [Connaissance des Energies](#)

## US House of Representatives ratified US\$3/kg «clean H<sub>2</sub>» tax credit

**Date:** 29/11/2021

G8, America, United States, Hydrogen, Policy

The US House of Representatives has approved a 10-year tax credit worth up to US\$3/kg of "clean hydrogen" expected to be applied in 2022. Currently, green hydrogen costs between US\$2.5-6/kg compared to US\$1-2/kg for grey hydrogen. The House version of the bill states that only hydrogen with lifecycle GHG emissions below 0.45kgCO<sub>2</sub>eq/kgH<sub>2</sub> will be eligible for the full US\$3 credit. The cleaner the hydrogen produced, the higher will be the tax credit received by producers, allowing on the longer-term green hydrogen to become more competitive compared to grey hydrogen. The tax credit rate will be adjusted depending on the CO<sub>2</sub> content per kg of H<sub>2</sub> (33.4% of the tax credit, i.e., US\$1/kgH<sub>2</sub> for hydrogen projects emitting 0.45-1.5 kgCO<sub>2</sub>/kgH<sub>2</sub>, 25% for those up to 2.5 kgCO<sub>2</sub>, 20% for those up to 4 kgCO<sub>2</sub> and 15% for those up to 6 kgCO<sub>2</sub>). Projects must begin construction before 2029 to claim the tax credit, while facilities in the 4-6kg CO<sub>2</sub>eq/kgH<sub>2</sub> category must be placed into service before 2027. The tax credit is not law yet as the bill still needs to be debated and voted on by the Senate.

**Source(s):** [REchargeNews](#), [US Congress](#)

## Nucléaire

### China sets to build fusion energy research facility

**Date:** 21/12/2021

China, Asia, BRICS, Emerging markets, Nuclear, Electricity, Projects, Technology, Power plants

China is building a research facility, the "Comprehensive Research Facility for Fusion Technology" (CRAFT), to incubate core technologies used in power generation of fusion energy that powers the sun. It is expected to be finished around 2024. Building a fusion energy reactor is China's new scientific ambition as the country's experimental advanced superconducting tokamak (EAST) is upgrading its experiment. The EAST is based on an approach called "magnetic confinement fusion" that uses magnetic fields to confine fusion fuel in the form of a plasma.

**Source(s):** [XinhuaNet](#)

## GE, BWXT and SGE cooperate to deploy BWRX-300 SMRs in Poland

**Date:** 20/12/2021

Europe, Poland, Electricity, Nuclear, Companies, Power plants

GE Hitachi Nuclear Energy (GEH), BWXT Canada (a designer, manufacturer of nuclear components company) and Synthos Green Energy (SGE, a technology and renewable project developer) have announced their intention to cooperate in deploying BWRX-300 small modular reactors (SMR) in Poland. The companies target the first BWRX-300 SMR in Poland to be operational in 2029. The partners aim to deploy at least 10 BWRX-300 SMRs in Poland by the early 2030s and BWXT could manufacture a wide range of products including reactor pressure vessels, reactor internals and other key components for the projects. GEH has also been selected by Ontario Power Generation (OPG) as the technology partner for the Darlington New Nuclear Project. GEH is working with OPG to deploy a BWRX-300 at the Darlington site that could be completed as early as 2028.

**Source(s):** GE

## CCS

### Capital Power and Enbridge work on a 3 MtCO<sub>2</sub>/year CCUS project in Canada

**Date:** 02/12/2021

G8, America, Canada, Companies, Projects, Technology, CCS

Capital Power Corporation (Canada) and Enbridge (a US pipeline company) have signed an MoU to collaborate on a CCS project capable to capture up to 3 MtCO<sub>2</sub>/year at Capital Power's 1,218 MW Genesee power plant near Warburg (Alberta, Canada). Capital Power is currently converting the Genesee 1 and 2 coal-fired units to CCGT units and the CCS project is expected to capture the CO<sub>2</sub> from the repowered units. CO<sub>2</sub> would be transported and stored through Enbridge's open access carbon hub that could also serve other local industrial companies. Enbridge and Capital Power have agreed to jointly evaluate and advance the CCS project. The project will be subject to the Government of Alberta's competitive carbon hub selection process and a future final investment decision. Enbridge, with the support of Capital Power, is applying to develop an open access carbon hub in the Wabamun area through the Government of Alberta's Request for Full Project Proposals process, which is expected to start as early as December 2021. Subject to the award of carbon sequestration rights and regulatory approvals, the proposed project could be in service as early as 2026.

**Source(s):** Capital Power

## Autres technologies

### Entre craintes et promesses, le Portugal attend toujours son lithium

**Date:** 20/12/2021

Portugal, Europe

Assis sur les premières réserves européennes de lithium, minéral essentiel à la transition énergétique, le Portugal attend début 2022 le verdict de l'autorité environnementale sur un important projet minier. Galp Energia et Northvolt prévoient en effet d'y développer une des premières usines de raffinage de lithium d'Europe. Alors que la Chine contrôle plus de 40% des capacités de production et près de 60% des capacités de raffinage de lithium dans le monde, l'Europe veut réduire sa dépendance vis-à-vis de l'extérieur en relançant sa propre exploitation minière.

**Source(s):** Connaissance des Energies

## China is securing battery metals on the global stage

**Date:** 16/12/2021

China, Asia, BRICS, Emerging markets

China is either the largest market or largest producer for all seven of the main minerals needed to build a typical electric car. China already consumes as many battery minerals as the rest of the world combined, and as demand grows it has been forced overseas to secure its domination of battery supply chains. China has domestic manganese and graphite resources, but for copper, nickel, cobalt, and lithium, it has been imperative to look overseas. Chinese companies already control some of the world's largest mines (Las Bambas copper mine in Peru, Morowali nickel mine in Indonesia, Sicomin and Tenke Fungurume copper-cobalt mines in DRC, and Sonora lithium mine in Mexico). China's overseas footprint in these four mineral markets is the result of efforts to address its own strategic vulnerabilities, and a forward-looking agenda that anticipated clean energy demand several years before it became topical in the US or Europe.

**Source(s):** [MERICS](#)

## Software versus hardware: how China's institutional setting helps and hinders the clean energy transition

**Date:** 10/12/2021

China, Asia, BRICS, Emerging markets, Technology

This Insight examines how China's institutional setting both contributes to and hinders the energy transition, with a particular emphasis on the energy sector. It also aims to dispel the binary view of China's governance and the energy transition, in which central government commitment is portrayed as the sole determinant of success. Finally, it sets out a preliminary framework for analysing the areas where technological and institutional factors make change more likely to be lasting and transformative, versus areas in which resistance will likely remain strong.

**Source(s):** [Oxford Institute for Energy Studies](#)

## China to establish new rare-earth mammoth through merger

**Date:** 05/12/2021

China, Asia, BRICS, Emerging markets

China is set to establish a global rare-earth giant based on the merger of rare-earth assets from several state-owned enterprises, in a move that analysts say will effectively enhance the development and concentration of the domestic rare-earth industry. China Northern Rare Earth (Group) High-Tech, a state-owned enterprise, has just agreed to form a strategic partnership with Hong Kong-listed private-sector counterpart China Rare Earth Holdings.

**Source(s):** [Global Times](#), [Nikkei Asia](#)