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The European Union-Russia-China energy triangle

Georg Zachmann

Executive summary

CONCERN IS GROWING IN the European Union that a rapprochement between Russia and China could have negative implications for the EU. We argue that energy relations between the EU and Russia and between China and Russia influence each other. We analyse their interactions in terms of four areas: oil and gas trading, electricity exchanges, energy technology exports and energy investments.

WE DISCUSS FIVE KEY hypotheses that describe the likely developments in these four areas in the next decade and their potential impact on Europe:

1. There is no direct competition between the EU and China for Russian oil and gas;
2. China and the EU both have an interest in curbing excessive Russian energy rents;
3. The EU, Russia and China compete on the global energy technology market, but specialise in different technologies;
4. Intercontinental electricity exchange is unlikely;
5. Russia seems more worried about Chinese energy investments with strategic/political goals, than about EU investments.

WE FIND NO EVIDENCE of a negative spillover for the EU from the developing Russia-China energy relationship.But, eventually, if these risks – and in particular the risk of structural financial disintermediation – do materialise, central banks would have various instruments to counter them.

GEORG ZACHMANN (georg.zachmann@bruegel.org) is a Senior Fellow at Bruegel

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1 Introduction

Energy is a key area for cooperation between the European Union and Russia, and between China and Russia. These bilateral relationships influence each other and each relationship is of strategic interest to the respective third party, with potential spillovers that present risks and opportunities. In principle, there are four main areas of cross-border energy relations: hydrocarbon trading, energy technology trading, electricity trading and foreign energy sector investments. We discuss five key hypotheses that describe a likely development in these four areas in the next decade and their potential impact on Europe:

1. There is no direct competition between the EU and China for Russian oil and gas;
2. China and the EU both have an interest in curbing excessive Russian energy rents;
3. The EU, Russia and China compete on the global energy technology market, but specialise in different technologies;
4. Intercontinental electricity exchange is unlikely;
5. Russia seems more worried about Chinese energy investments with strategic/political goals, than about EU investments.

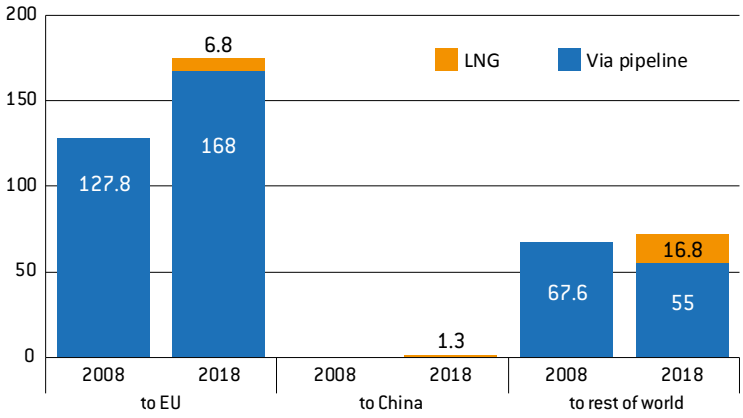
The speed of energy-sector decarbonisation in China, Russia and the EU, and the way it is done, will also be key drivers of future bilateral energy relationships. If the EU choses to focus on full electrification of energy consumption using domestice renewables by the middle of the century, hydrocarbon trading relationships will become irrelevant. But if the EU decides to rely heavily on imports of 'clean' fuels from Russia, such as synthetic fuels[1], existing hydrocarbon trading patterns might be perpetuated. The volatility in the domestic debates on the speed of energy-sector decarbonisation and the right approach to it makes it very difficult to forecast developments in energy relations over the longer term[2]. This Policy Contribution thus focuses on the next ten to 15 years.

2 There is no direct competition between the EU and China for Russian oil and gas

Oil and gas exports continue to be the backbone of Russia's economy. In 2018 they accounted for 59 percent[3] of the total value of Russia's exports and represented 46 percent[4] of Russia's total federal revenues. On the other side, in 2018, 70 percent of Russian natural gas exports went to the EU, while 15 percent of Russian oil exports went to China[5]. For China and the EU, energy imports from Russia are significant. In 2018, according to Eurostat, 27.3 percent of the EU's total oil imports and 40.2 percent of its total gas imports came from Russia. Meanwhile, Russian oil accounted for 15.4 percent[6] of China's total oil imports (Russia's share of China's total gas imports is only 1 percent).

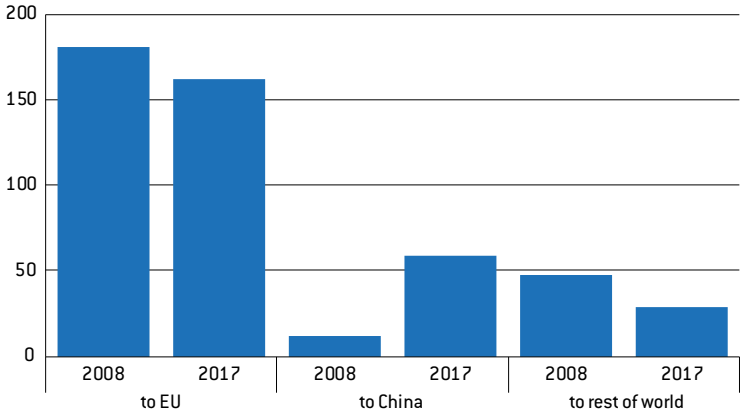
1 This can for example be hydrogen or methanol. BDI (2018), for example, includes a scenario in which Germany alone will import 340 terawatt hours of synthetic fuels, which is equivalent to more than 60 percent of current German electricity demand.
2 See Tables 1 and 2 in Zachmann and Marcu (2018).
3 Sources: https://wits.worldbank.org/ and https://oec.world/en/.
4 Author's calculations based on data provided by the Ministry of Finance of the Russian Federation (see http://www.eeg.ru/pages/580).
5 Figures are author's calculations based on data in BP Statistical Review of World Energy 2019.
6 Author's calculation based on data in BP *Statistical Review of World Energy 2019*.

Figure 1: Russian gas exports (billions of cubic metres)



Source: Bruegel based on BP *Statistical Review of World Energy* 2009 and 2019 editions, and Central Bank of the Russian Federation.
Note: LNG = liquefied natural gas.

Figure 2: Russian oil exports in millions of tonnes



Sources: Bruegel based on Eurostat, Central Bank of the Russian Federation, https://oec.world/en/ and BP *Statistical Review of World Energy* 2018.

There is a concern in the EU that greater cooperation between Russia and China on energy could be detrimental to the EU's energy interests. For example, if Russia becomes less reliant on the EU as a destination for its energy exports, Russia might become more assertive in energy negotiations and also political negotiations[7]. Russia's leadership has highlighted on various occasions the increasing importance of China for the Russian energy sector. But is such a shift realistic and would it be a problem for the EU?

Only about 10 percent of Russian oil exports go via direct pipelines to the EU. Another 10 percent goes already via pipelines to China[8]. In the oil market, it is already largely possible for Russia to ship all its oil to China via the sea route. But this would involve high transport costs, and refineries in China are not optimised for Russian oil grades. At the same time, the impact on the EU would be manageable because China would then have to import less oil from other countries – allowing the EU to buy elsewhere, though with higher transport costs and with some intra-European disruption (refineries in the east might become less competitive relative

7 We cannot explore the logic behind current observed and potential Russian gas and oil projects as they are often a complex combination of foreign-policy objectives (such as forging alliances), economic motives (such as linking new sources to new consumers) and internal distributional motives (such as providing rents for powerful stakeholders).

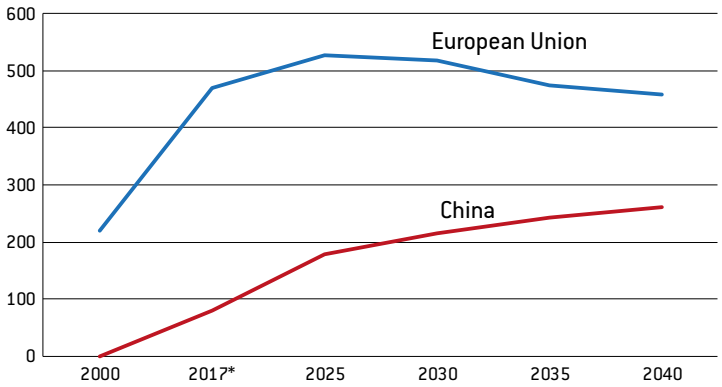
8 See https://en.wikipedia.org/wiki/Eastern_Siberia%E2%80%93Pacific_Ocean_oil_pipeline.

to refineries on the coast). This seems therefore to be a relatively symmetric lose-lose scenario without much strategic value for either side.

For gas, the story is more complicated. Russia's pipeline infrastructure is still largely directed towards the EU – and this would change only slowly. Of Russia's gas exports, 68 percent goes through pipelines to the EU[9]. Russia currently has only one gas pipeline to China. And in terms of projects under construction, the Gazprom[10] projects to supply the EU (Nord Stream 2: 55 billion cubic metres (bcm) and Turkstream: 31 bcm[11]) have greater capacity than the China-leaning projects (Power of Siberia: 38 bcm[12]). Europe continues to be a much more attractive market for Russia with existing pipeline infrastructure (345 bcm per year (EIA, 2019)), better developed resources[13] and higher prices[14]. Connecting the West Siberian fields to China would be very expensive and time consuming. Consequently, it appears likely that the bulk of gas exports to China, if they increase, will not be drawn from fields in Western Siberia. Furthermore, China so far has not given gas-import projects from Russia any preferential treatment, but seems to have commercially exploited Russia's eagerness to diversify its export portfolio by pushing through a very low gas price[15].

It is expected that by 2040, Chinese demand for gas imports – currently at about a fifth of the EU's – will increase drastically, despite significantly increasing domestic production. According to the IEA (2018) new policies scenario, Chinese demand will be equivalent to more than half of the EU's gas import demand by 2040 (Figure 3), while according to the BP (2019) scenario, Chinese import demand would even surpass the EU's import demand[16]. In this context, it is actually more surprising that Russia continues to expand its currently under-utilised gas delivery capacity to the EU at a faster pace than pipelines to China.

Figure 3: EU/China gas import demand, million tonnes of oil equivalent



Source: Bruegel based on gas production and consumption in the new policies scenario by the IEA (2018). Note: EU production includes Norway. * = estimated.

9 Author's calculation based on data in BP *Statistical Review of World Energy 2019*.

10 Gazprom has a state monopoly over gas exports via pipeline.

11 Additional branches of both projects are at time of writing being discussed.

12 There some more distant projects such as Power of Siberia II with 38 bcm.

13 Reserves in East Siberian fields, which would be closer to China, are estimated to be 3510 bcm, while gas reserves in West Siberian fields, which can be connected easily to existing pipeline systems to the EU, are 31,685 bcm.

14 China so far has not exploited Russia's political commitment to the pivot by seeking commercial concessions and negotiating a gas contract that would arguably allow the Power of Siberia-pipeline only to break-even at oil-prices above $100/barrel (see https://www.europeangashub.com/wp-content/uploads/attach_688.pdf).

15 See *StopFake.org*, 'Gazprom promises China a supply of natural gas it cannot deliver', 18 October 2018, available at https://www.stopfake.org/en/gazprom-promises-china-a-supply-of-natural-gas-it-cannot-deliver.

16 Author's calculation based on data in BP *Statistical Review of World Energy 2019*.

Box 1: Competition for central Asian gas between EU, Russia and China

Central Asia has significant gas reserves, in particular in Turkmenistan (19,000 bcm), Azerbaijan (2,100 bcm), Kazakhstan (1,000 bcm) and Uzbekistan (1,200 bcm)[17]. Russia, China and the EU are interested in tapping into these resources. In the past, Russia was the only country connected via pipeline to Central Asia. It used its exclusive access to manage the price and volume of exports from the region. China broke this monopoly by building the 55 bcm Central Asia-China gas pipeline to Turkmenistan in 2009. Currently Uzbekistan and Kazakhstan provide nearly 40 percent of China's total gas imports through this pipeline. An additional pipeline from Turkmenistan to China ('Line D' bypassing Kazakhstan by going through Kyrgyzstan) was announced in 2013[18]. But in 2019 Russia's Gazprom – somewhat surprisingly – began buying gas from Turkmenistan, securing gas volumes that Turkmenistan could otherwise export to China[19].

The EU has also been trying to gain access to the region's resources, while avoiding reliance on existing or planned Russian pipelines. The Transcaspian pipeline would bring Central Asian gas to Azerbaijan from where it could potentially flow to the EU through the Southern Gas Corridor. Russia has so far been able to block this project. One main stumbling block – the legal status of the Caspian Sea – was resolved in 2018, but Russia and Iran continue to indicate that they will not make it easy for such a project to go ahead quickly.

It thus appears more likely that any collision of energy interests in Central Asia will involve Russia and China, rather than China and the EU (which infrastructure-wise will be largely kept out of the region, unless there are some at time of writing unlikely developments in Iran-EU relations).

As Russia in principle holds sufficient reserves to satisfy both Chinese and EU import demands for many decades, there will be no competition for Russian reserves. Furthermore, the increasingly liquid market for shipments of liquified natural gas (LNG) would counteract any future Russian strategy of depriving the EU market of gas and oversaturating the Chinese market[20]. As for oil, the result would be no shortage in the EU, but an expensive re-routing of international LNG routes, which would hurt Russia and the EU equally.

In summary, Russia has enough oil and gas reserves to supply both the mature European market and the developing Chinese market. Increasing its oil and gas exports to China will not strengthen Russia's position in negotiations over gas supplies to the EU because Russia cannot credibly threaten to divert volumes from the European market to the Asian market. By contrast, the EU should carefully assess how to manage the risks associated with an increasing share of Russian gas in its gas imports.

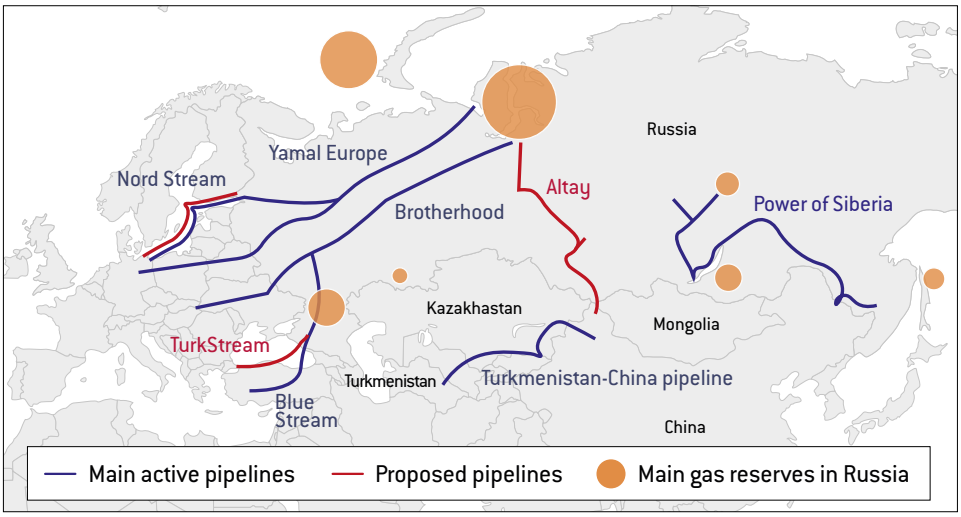
17 Author's calculations based on data in BP *Statistical Review of World Energy 2019*.

18 Michael Lelyveld, 'China's Gas Supplies Shadowed By Stalled Pipeline – Analysis', *Eurasia Review*, 25 June 2019, available at https://www.eurasiareview.com/25062019-chinas-gas-supplies-shadowed-by-stalled-pipeline-analysis/.

19 We cannot say whether this is just a way for Gazprom to meet its supply obligations or a move to limit direct Central Asian exports to China.

20 This would require a massive build-up of Russian-Chinese pipeline connections (in total about four times the length and four times the diameter of the €10 billion Nord Stream II project), which would be very expensive and time-consuming.

Figure 4: Main gas reserves and cross-border pipeline systems in Eurasia



Source: Bruegel.

3 China and the EU have an interest in curbing excessive Russian energy rents

Russia is a dominant gas and oil supplier to the EU. In the gas market, Russia has exercised its market power in various ways to prevent competition and achieve higher prices. Measures include various interventions (including export taxes, export monopoly, dominance of state-owned enterprises, control over foreign investments and preventing independent pipeline transit from Central Asia), specific infrastructure investments (in pipelines and storage) and pricing strategies (such as price discrimination between countries and predatory pricing).

In the oil market, Russia has played a major role in allowing the Organisation of the Petroleum Exporting Countries (OPEC) to coordinate supply cuts to stabilise global oil prices since 2016[21]. The Russian government was, for example, able to convince companies to observe production limits[22].

Such an approach implies higher oil and gas prices (compared to a properly competitive market) for both the EU and China, and thus a transfer of welfare from the importers to the exporters. The EU and China therefore have an interest in mitigating Russia's market power in the oil and gas markets.

If China and the EU could convince Russia to open its exploration and production sector to foreign companies and to allow them to export in a non-discriminatory way, energy costs for China and the EU could be substantially reduced. The welfare transfer out of Russia could be mitigated by non-discriminatory export taxes, while true competition on the production side could bring down production costs and completely remove the detrimental impact of inefficient state companies.

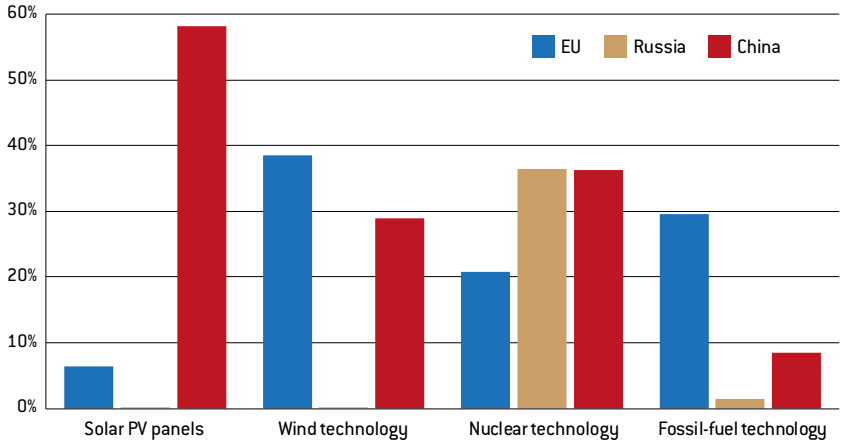
21 OPEC, 'OPEC and non-OPEC Ministerial Meeting', press release 25/2016, 10 December 2016, Organisation of the Petroleum Exporting Countries, available at https://www.opec.org/opec_web/en/press_room/3944.htm.

22 Vladimir Soldatkin, 'Russian oil output down in February, misses global deal target', *Reuters*, 2 March 2019, available at https://www.reuters.com/article/us-oil-opec-russia/russian-oil-output-down-in-february-misses-global-deal-target-idUSKCN1QJ04T.

4 The EU, Russia and China compete on the global energy technology market, but specialise in different technologies

The EU, Russia and China all export energy technology to one another and to the rest of the world (Figure 5). China has been very successful in exporting coal-fired power plants. Since 2010, it has invested $45.5 billion in the coal sector and $3.8 billion[23] in the solar sector abroad. The photovoltaic (PV) panel industry also plays an important role for China: in 2018, the total value of PV products exported was $16.1 billion[24]. This success has been accompanied by foreign complaints about unfair trade practices – and has even led the EU to implement temporary protective measures on photovoltaic panels[25]. So far, China's wind and nuclear industries remain focused on its growing domestic market[26].

Figure 5: Energy technology exports, shares of global exports (2018)



Source: UN Comtrade. Note: Aggregation performed by Harmonised System Code. Solar PV panels (854140); wind technology (850231, 730820); nuclear technology (840110, 840120, 840140); fossil-fuel technology (841990, 841181, 841199, 841182, 841950, 840420).

Russia remains one of the big players in the export of nuclear power plants. Russia has even secured important projects in the EU (Hungary) and China[27]. Since the collapse of the Soviet Union, Russia has constructed nine nuclear power plants abroad: in Ukraine (2), Iran

23 See 'China's global energy finance', database, Boston University, available at https://www.bu.edu/cgef/#/all/EnergySource/Coal.

24 Liu Yuanyuan, 'Chinese Solar Manufacturers Increased Production, Export in 2018 While Domestic Installations Fell', *Renewable Energy World*, 2 April 2019, available at https://www.renewableenergyworld.com/2019/02/04/chinese-solar-manufacturers-increased-production-export-in-2018-while-domestic-installations-fell.

25 The EU imposed anti-dumping tariffs on Chinese solar panels in 2013, lifting them in 2018 (see http://trade.ec.europa.eu/doclib/press/index.cfm?id=1904). As a result, in the first half of 2019, China's photovoltaic exports increased to $9 billion (see Vincent Shaw, 'Chinese solar production figures continue to ramp up', *PV Magazine*, 26 July 2019, available at https://www.pv-magazine.com/2019/07/26/chinese-solar-production-figures-continue-to-ramp-up/).

26 *"China is the world's largest wind power market in both new and cumulative installations. In 2018, the country installed 20.2 GW of onshore wind energy and 1.6 GW of offshore wind farm, representing 44% and 37% of global market share respectively."* See *Evwind*, 'China is the world's largest wind power market', 14 August 2019, available at https://www.evwind.es/2019/08/14/china-is-the-worlds-largest-wind-power-market/68449. In 2018 China installed seven nuclear power units (8.8 GW), out of nine units installed globally.

27 *Global Construction Review*, 'Russian reactors in China: Rosatom signs deal to deliver two VVER units in Liaoning', 10 June 2019, available at http://www.globalconstructionreview.com/news/russian-reactors-china-rosatom-signs-deal-deliver-/.

(1), China (4) and India (2) (World Nuclear Association, 2019). A further seven are under construction and 11 have been contracted (World Nuclear Association, 2019). In other energy technologies Russia remains largely limited to post-Soviet markets.

EU energy technology exports are very diverse. Wind and gas turbines, network infrastructure and energy management systems are some of the EU's strengths. But the EU has become less competitive on global markets for coal, nuclear and photovoltaic plants.

Consequently, the competition between Russia, China and the EU on the global market for electricity supply technologies is less a competition over where a certain type of technology (eg PV panels) comes from (typically China), but rather over choices about what technology is installed (for example, a Russian nuclear reactor or a European wind park).

5 Intercontinental electricity exchange is unlikely

Russia in 2018 exported about four terawatt hours (TWh) to the Baltic countries, eight TWh to Finland and three TWh to China[28]. Together, these exports only represented a little over 1 percent of Russian electricity production (1100 TWh)[29].

One exciting prospect for China-Russia-EU collaboration would be the opportunity to transmit electricity from one end of the Eurasian landmass to the other. With high shares of renewables it would in principle be very attractive if wind-power from the Atlantic and Pacific coasts, solar power from Central Asia and hydropower from Siberia could be pooled together to ensure more stable electricity supply.

The Russian power grid already covers 10 time zones and is interlinked with 15 countries (forming the Integrated Power System). Interconnecting this huge grid in synchronous or asynchronous[30] mode with the EU continental power system (Entso-E) has been discussed and studied in the past (UCTE, 2008), but currently it seems more likely that EU countries (the Baltic states) and non-EU countries (Ukraine, Moldova) that are still linked to the Integrated Power System will synchronise with the European power system. In the east, high-voltage direct current connections (ie without synchronisation) between China and its northern neighbours are under discussion[31].

The Russian network would need to be substantially strengthened to carry significant intercontinental flows. Currently, for example, electricity flows between the European Russia and Urals price zone and the Siberia price zone within Russia are constrained, leading to persistent price differences between the two zones. And east-west transmission bottlenecks in some parts of Asian Russia only allow electricity equivalent to the generation from a single coal-fired power plant to be transmitted in one direction or the other (Pipkin, 2016). Consequently, even strong interconnectors between Russia and China together with the full synchronisation of Russia and the EU would not imply significant intercontinental electricity exchanges unless intra-Russian transmission is substantially strengthened.

An alternative that has been discussed in the EU (see for example JRC, 2017) and China

28 These are net exports. See SO-UPS (2019).

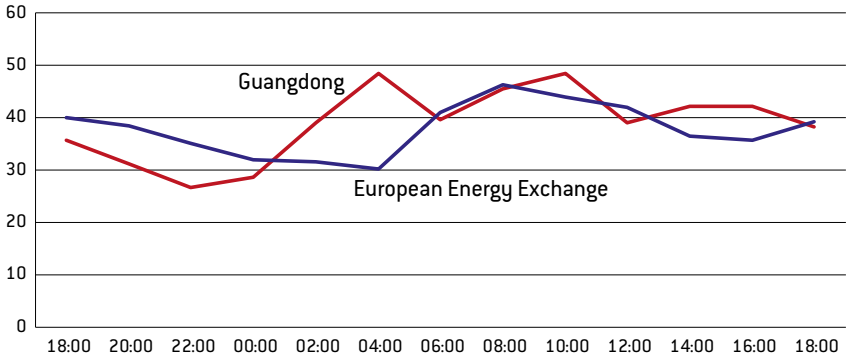
29 Currently, electric power is transmitted from Russia to China through three alternating current lines (two 220 and one 110 kV lines) and one direct current line (500 kV).

30 Synchronisation implies that two alternating current transmission systems are run as one system with the same frequency at each point of the system. Asynchronous connection of two alternating current transmission systems is established by converting the alternating current of one system into direct current and then converting this direct current again into alternating current with the frequency of the other system.

31 JRC (2017) noted: *"One such initiative is the Northeast Asia Power Grid Interconnection (NEAG) which aims at linking the north-eastern Asian countries by a high voltage power grid. The planned network consists of 12 EHV/UHV DC interconnections sized at 800 kV and 8-10 GW with distances of 200-2300 km."*

(for example the Global Energy Interconnection Development and Cooperation Organisation, https://en.geidco.org/) is a dedicated intercontinental supergrid. Instead of coupling existing alternating current transmission systems, a new dedicated direct current system would be constructed. The JRC (2017) proposal foresees a 4-10 gigawatt connection over a distance of 5600 kilometres, costing some €15 billion. This would imply that such a line would only be commercially viable either if capital costs are very low or the price differentials between the EU and China would be high in most hours[32]. Current price pointers for China (which only feature regional experimental markets such as Guangdong) and the EU (where we use the German wholesale electricity price (EEX) that is also relevant for most of Germany's neighbours) indicate that price differentials at the same moment can be quite small (Figure 6). Consequently, on a commercial basis, a dedicated intercontinental electricity system seems rather unlikely, unless the cost of these systems drops dramatically, or high and persistent price differentials emerge.

Figure 6: Hourly electricity prices for the same moment in EU and China (€/Mwh)



Source: Bruegel based on data provided by The Sino-German Energy Partnership and EEX Group. Note: data for 16 May 2019. Times are Central European Summertime.

Therefore, in terms of electricity-system development, increased continental integration between western Russia and the EU and eastern Russia and China seems the most cost efficient, while intercontinental electricity exchanges will likely remain limited.

6 Russia seems more worried about Chinese energy investment with strategic/political goals, than about EU investment

EU-based companies are important players in the Russian energy sector. Uniper, Enel and Fortum are among the largest electricity producers in Russia; BP owns a 19.75 percent share of the world's largest oil producer Rosneft, and many major EU oil and gas players (including Shell, Eni, Total, OMV and Wintershall DEA) are engaged in exploration and production joint ventures in Russia. EU energy technology companies including ABB, Siemens and Schneider Electric make and sell energy technology in Russia.

Involvement of EU companies in Russia seems, however, carefully guided by the Russian side. Participation in oil and gas production projects appears to be contingent on joint ven-

32 At 5 gigawatts, a 5 percent interest rate and 10 percent losses and 100 percent utilisation, absolute price differentials must average €20/megawatt hour to pay only for the capital cost.

tures with Russian companies (with strong connections to the state). Activity in the electricity sector is – as in all countries – largely driven by the regulatory framework. For EU companies that play by these rules, activity appears in general to be very profitable. It has been argued that Western money was a helpful disciplining device contributing to the modernisation of Russian economic policy, and that the decline of investment from the West was followed by a deterioration of the business climate[33].

Chinese investments in Russia focus on the mineral extraction sector[34] and lag foreign trade flows[35]. Chinese investment is dominated by a few big transactions in oil and gas exploration, the single largest example being the liquified natural gas export projects implemented by Chinese companies jointly with Novatek[36]. Moreover, some other major FDI projects that have been announced have so far not materialised. Chinese investment in Russia appears much more politicised than European investment, with state-owned Chinese companies investing in heavily government regulated sectors in Russia.

Therefore, reviving the old idea that Europe could offer Russia a partnership for modernisation while China would make Russia into an ancillary supplier of raw materials, will likely attract the interest of the Russian economic elite. It seems plausible, for example, that investment by private European companies in the Russian energy sector will have more positive spillovers (in terms of know-how and the general business climate) than investments by Chinese state-owned enterprises.

7 Conclusion

In the interconnected energy world, unilateral actions and bilateral relationships have an impact on third parties. EU-Russia energy collaboration remains dominated by Russian gas and oil exports to the EU. The emergence of China will not dramatically alter this picture. Russia's reliance on oil and gas exports to the EU and China continues to increase. However, given Russia's huge resources, the globalising energy market and the trend away from fossil fuels, there is little competition between the EU and China for Russian resources. This implies that the Russian pivot to Asia in terms of energy exports is likely to continue but with limited negative consequences for the EU. However, both the EU and China have an interest in reducing Russian pricing power over oil and gas. As hydrocarbon markets are essentially global, the EU and China are on the same side.

Economic opportunities are currently more limited in terms of connecting the power systems. For this to happen, substantial technical and political challenges would have to be overcome, and the benefits remain limited because the individual systems are already today quite large and diversified.

There is strong competition between Russia, China and the EU on the global energy technology market. Currently, this competition is less about which of the three delivers a certain type of equipment (eg a coal plant), but whether one technology that Europe is good at, or another that China is good at, is being deployed.

There is competition between the EU and China for the Russian energy market. China has so far remained relatively restrained and has mainly focused on upstream oil and gas projects.

33 *"Western money is not doing the talking in Moscow these days, so it seems, paradoxically, that by imposing sanctions on Russia the U.S. and its allies may have whittled away an instrument of leverage they once had."* See Nicholas Trickett, 'Russia's FDI Outlook Grim, with No Chinese Rescue in Sight', *Russia Matters*, 11 July 2019, available at https://www.russiamatters.org/analysis/russias-fdi-outlook-grim-no-chinese-rescue-sight.

34 Baranova and Porokhova (2017) noted that *"mineral resource sectors comprise about 68% of the total implemented FDI from China into Russia."*

35 Financial flows between Russia and China lag significantly behind foreign trade flows: in 2015-16, China's share of Russian foreign trade turnover was 10.1 percent, while the share of direct investment was as low as 5.4 percent.

36 Source: see footnote 33.

There is a risk for Russia that isolated investments by Chinese state-owned companies will reinforce the trend of Russia becoming a mere resource provider. By contrast, investment by European companies has likely led to much more positive spillovers in terms of know-how transfer, anchoring reforms that improve the business climate and diversifying the economy. But some of those benefits have been lost with the rollback in Russia in recent years of the more liberal market environment in which European companies could operate competitively.

Economic relations are already difficult because the EU, Russia and China follow quite different economic, legal and regulatory models. The differences are amplified by politically motivated EU and Russian economic sanctions and countersanctions, concern about Russian use of financial and energy resources for political purposes, and concern about politically motivated investment by Chinese companies in strategic sectors in the EU and Russia.

Economic policy tools including trade and investment agreements or regulatory harmonisation thus come up against their limits in the broader political landscape. These issues are beyond the scope of this paper. Within these political framework conditions, there is no clear reason for the EU to relinquish a self-interested energy policy that is focused on pushing hydrocarbon import prices lower, exporting EU energy technology and making profitable investments. Because of shifting and uncertain demand and supply in the energy sector, this will be largely based on a transactional approach, rather than long-term strategic alliances.

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