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Briefing paper

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CHINESE-FINANCED COAL PROJECTS IN SOUTHEAST EUROPE

A Trojan horse in the EU's decarbonisation agenda?

1. OVERVIEW

Several EU enlargement countries in the Western Balkans[1] - as well as EU member states Romania and Greece - plan to build new lignite power plants. In contrast, the EU aims to decarbonise its energy sector by 2050, most EU countries no longer build new coal plants and seven EU states are already coal-free.[2] The Balkan coal plans starkly conflict with the Paris Agreement's aim of limiting climate change to 1.5°C.[3]

As the international financial institutions have virtually phased out direct coal financing,[4] most of the plants are slated for loans from the state-owned China Eximbank, as well as other Chinese public banks.

The **two financing deals signed so far** by Chinese banks for lignite power plants in the region are for Stanari (CDB, June 2012) and Kostolac B3 (EximBank, December 2014).

All the projects exhibit breaches of EU legislation on environment, state aid and/or procurement.

They will also **lock EU accession countries into several decades of coal use** at a time when the EU is decarbonising its energy sector. It also **threatens to spawn a group of pro-coal countries in the EU** once accession takes place, which could further weaken the EU's climate ambitions: **a whole new group of Polands**.

Nevertheless, apart from Stanari in Bosnia-Herzegovina, which started operating in 2016, **all the**

[1] Bosnia-Herzegovina, Serbia, Montenegro, Macedonia, and Kosovo.

[2] Cyprus, Luxemburg, Malta, Lithuania, Latvia, Estonia and Belgium. France will close its last plants by 2021 and Sweden by 2022. The UK, Austria and Italy plan to quit coal by 2025 – and have already started to reduce their coal capacity - and the Netherlands and Portugal by 2030. Finland plans to introduce a law to end coal by 2029. https://beyond-coal.eu/data/

[3] Alexander Pfeiffer, Richard Millar, Cameron Hepburn, Eric Beinhocker: The '2°C capital stock' for electricity generation: Committed cumulative carbon emissions from the electricity generation sector and the transition to a green economy, Received 11 September 2015, Revised 16 February 2016, Accepted 18 February 2016, Available online 24 March 2016, http://www.oxfordmartin.ox.ac.uk/publications/view/2119; Oil Change International et al: The Sky's Limit: Why the Paris Climate Goals Require a Managed Decline of Fossil Fuel Production, September 2016, http://priceofoil.org/2016/09/22/the-skys-limit-report/

[4] The European Investment Bank has effectively halted financing for coal power plants and the European Bank for Reconstruction and Development and World Bank have strictly limited such lending, with the possible exception of the planned Kosova e Re plant in Kosovo.

coal plans are delayed. It is not too late to stop them.

2. CHINESE-FINANCED COAL POWER PLANTS

KOSTOLAC B3 LIGNITE POWER PLANT, 350 MW, SERBIA

In November 2013 a deal was signed with China Machinery Engineering Corporation (CMEC) to construct the new Kostolac B3 lignite plant in north-east Serbia. No tender procedure took place. Instead, the Chinese and Serbian governments signed an intergovernmental agreement freeing joint projects from tender obligations[5] – a move which would not be allowed under EU law.

A USD 608 million loan contract was signed with China Exim Bank in December 2014. In early 2015 it was ratified by the Serbian parliament in an extraordinary session announced to the public less than 24 hours in advance. The contract contains several problematic provisions, e.g. any arbitration will take place in Beijing.

The Serbian government took the loan on behalf of state company EPS, raising issues of compliance with its state aid obligations under the Energy Community Treaty.

The environmental impact assessment process had to be repeated after the original approval expired and the Espoo Convention Implementation Committee criticised Serbia for failure to assess the transboundary environmental effects of the plant. A new environmental assessment was carried out in 2017 and the study was approved on 28 September.

Just weeks later, on 20 November – a few days before the China-Central & Eastern Europe summit in Budapest - it was suddenly announced that construction of Kostolac B3 was starting. Surprised, the Center for Ecology and Sustainable Development (CEKOR) requested the building permit. However, the only document disclosed so far is a permit for the B3 chimney, not for the whole plant. And it is dated July 2017, before the environmental assessment was even completed.

To add to the legal issues, the expansion of the captive Drmno opencast mine was in 2013 exempted from undertaking an EIA process[6], a decision which appears to conflict with Serbian legislation as well as the EIA Directive under the Energy Community Treaty.

The EU has updated its industrial emissions rules, which Kostolac B3 will be obliged to abide by on entering the EU, if not before. However, the air emissions limits in the Kostolac B3

[5] On 20 August 2009 the Serbian government signed a Memorandum of Understanding with the Chinese government on economic and technical co-operation in the field of infrastructure. Annex 2 to the 2009 agreement was signed on 26 August 2013. This annex includes a clause in Article 5 that (our translation): Agreements, contracts, programmes and projects carried out in accordance with Article 4 of the Agreement on the territory of the Republic of Serbia do not carry an obligation to publish a public tender for carrying out investment works and delivery of goods and services, except if it is otherwise specified in the commercial contract from paragraph 4 of this Article."

[6] Ministry of Energy, Development and Environmental Protection of the Republic of Serbia: Decision no.353-02-901/2013-05, dated 26.07.2013.

environmental assessment are not in line with the new standards (the so-called LCP BREF). As an EU accession country, Serbia needs to make sure that any new plant is in line with these standards or it risks being landed with expensive retrofit costs later on.

In 2012 the China Banking Regulatory Commission issued the Green Credit Directive as a means of supporting Chinese stakeholders in upholding environmental and social standards in overseas projects. Article 21 states that Chinese banking institutions "*shall…make sure project sponsors abide by applicable laws and regulations on environmental protection, land, health, safety, etc. of the country or jurisdiction where the project is located.*" This provision has so far not been adhered to in the case of Kostolac B3.

The plant's contribution to Serbia's energy security is also doubtful, as the Drmno mine suffered serious flooding in 2014. As well as having to mount a huge effort to save the mine during the May floods, between July and September more than 2 million m^3 of water spilled into the mine, bringing with it around 800 000 m^3 of sludge and mud, and engulfing mining machinery in mud.

Kostolac B power plant has already undergone rehabilitation at its existing units, carried out by the same CMEC and financed by China Eximbank. The project has raised concerns regarding its functionality.

Although the Serbian Prime Minister announced the completion of the Kostolac B1 and B2 desulphurisation units in August 2017, between then and February 2018 the local community observed that the desulphurisation installation was not working. In response to an enquiry from CEKOR, the Environmental Inspectorate stated on 01.03.2018 that the de-SOx installation was not operating during the winter months. It added that the planned landfill for the gypsum

STANARI LIGNITE POWER PLANT, 300 MW, REPUBLIKA SRPSKA, BOSNIA-HERZEGOVINA

The project was initiated by Energy Financing Team (EFT) and financed by the state-owned China Development Bank (CDB). Construction, carried out by Dongfang Electric Corporation, started in 2013 and the plant started commercial operations in September 2016. Due to its use of a dry cooling system, the plant's net efficiency level is only around 34.1 percent, compared to 36.5-40 percent required by the EU best available techniques standard.

Originally the plant's environmental permit allowed air pollution from the plant to be 2-3 times as high as allowed by the EU Large Combustion Plants Directive. Only after a complaint to the Energy Community dispute settlement mechanism was submitted by environmental group Center for Environment from Banja Luka in January 2014, was the permit reviewed. Since the plant was permitted, the Energy Community's rules have changed to require the application of the stricter Industrial Emissions Directive for plants entering operation after 2019, rendering Stanari out of step before it even entered operation.

Stanari is currently under examination by the Espoo Convention due to BIH's failure to notify neighbouring Croatia and Serbia about the plant's potential transboundary impacts. This also raises doubts about whether the project complies with Article 21 of China's Green Credit Directive, requiring national legislation to be followed during its preparation.

In May 2017 media reported that Croatia's HEP is considering buying the Stanari power plant from EFT, or a 50% share in it, raising questions about its profitability. No further information has become available since then.

According to data on the ENTSO-E platform, in 2017 Stanari was offline for at least 53 days between March and December. A letter from the energy system operator of Bosnia-Herzegovina explains that the plant was mainly undergoing technical "corrective" fixes on those days. The fact that a new unit needed to be taken offline for such long periods of time raises questions about the plant's readiness to go online at all.

resulting from the desulphurisation process had not yet been built. In neither case did it explain why.

TUZLA 7, 450 MW, FEDERATION OF BIH, BOSNIA-HERZEGOVINA

In August 2014, publicly-owned electricity company Elektroprivreda Bosne and Hercegovine (EPBiH) signed an construction contract with China Gezhouba Group and Guangdong Electric Power Design for the construction of a new unit at Tuzla, after Japan's Hitachi - also shortlisted - dropped out of the project partly due to its poor economics.

The price tag for construction at the time was EUR 785.7 million, but it was later admitted that the project was not economically feasible in this form. The current construction cost of the plant is EUR 722 million, but crucial questions remain unanswered on:

- What compromises have been made to lower the cost?
- Expected electricity sale prices?
- The expected coal price and, given the BIH mines' inefficiency, the chances of reaching it?
- Assumptions on future CO_2 costs
- How the plant's feasibility would be affected if the planned Banovići plant, less than 30 km away, is also built?

Given that EPBiH is state-owned, it is the public purse that will pay if the project is unprofitable.

Tuzla 7 obtained a new environmental permit in July 2016 as the original one from 2009 expired in November 2015. The permit is being challenged in court by Ekotim, due to procedural irregularities and deficiencies in the permit.

In addition, local people from the village of Šićki Brod are resisting the construction of the ash landfill for the new plant. In early April 2016 they delivered a petition with 2100 signatures against the proposal to the Federal Ministry of Environment and Tourism.

The Federation of BiH government plans to provide a guarantee for a planned loan from China

Exim Bank, but it is not clear under what conditions, raising issues of compliance with its state aid obligations under the Energy Community Treaty.

On 27 November 2017 at the China-Central and Eastern Europe summit, a surprise signing of an Eximbank loan contract for Tuzla 7 took place. Yet the state guarantee has not been examined by the State Aid Council or approved by the Federal Parliament, no energy permit for the project has been issued, and the environmental permit is being challenged in court.

Like Kostolac B3, Tuzla 7 is not designed to be in line with the new EU LCP BREF pollution control standards. In November 2013, the Center for Ecology and Energy from Tuzla launched a report on the health impacts of existing and planned coal thermal power plants in the Tuzla area. Using WHO methodology, the study found that coal plants around Tuzla, including Tuzla 7 and the planned unit at Banovići, are expected to cause total health-related economic costs of EUR 810 million and the loss of 39,000 life-years in the period 2015-2030.

3. COAL POWER PLANTS THAT MAY RECEIVE CHINESE FINANCING

BANOVIĆI, 350 MW, FEDERATION OF BIH, BOSNIA-HERZEGOVINA

A new plant at the Banovići mine near Tuzla is planned by the predominantly state-owned RMU Banovići (Banovići Brown Coal Mines). On 24.11.2015 an EPC contract was signed with Dongfang. Financing is expected from the Industrial and Commercial Bank of China (ICBC) but has not been signed yet.

There is a serious lack of energy planning and co-ordination between Tuzla 7 and Banovići. It is very unlikely that two plants just a few kilometres from one another can both be feasible, but they are being developed in parallel, each as if the other did not exist.

The capacity of the Banovići plant was changed during the tender process from 300 MW to 350 MW, which as well as being questionable from the procurement perspective, meant that a new environmental impact assessment had to be carried out in 2015.

A new environmental permit was issued on 11 January 2016 but the Ministry for the Environment and Tourism failed to notify even those who had taken part in the consultation process. It was nearly two months before NGO Ekotim was able to obtain the permit. Ekotim is challenging the permit in court due to deficiencies in the procedure, the EIA study and the permit.

Another issue of concern with the planned plant is water use. A new reservoir is planned at Ramići that would be used to cool the coal plant, however filling the reservoir during drier periods may be in direct competition with filling Lake Modrac, which is used for drinking water for Tuzla and for cooling the Tuzla power plant. A further concern is that only an earth dam is planned to keep the reservoir in place, which may not be enough in times of heavy rainfall. It may pose a danger to communities downstream. As these weaknesses were not addressed in the environmental permit for the reservoir, it too is now being challenged in court by Ekotim.

Until recently both Tuzla 7 and Banovići had been backed by the Federal government. However in December 2017 the Federal Ministry for Spatial Planning denied RMU Banovići a construction permit for the plant. Key issues such as water supply, coal supply, wastewater, flue gases and

ash disposal had not been resolved, and the Ministry concluded that the project is not in line with the Tuzla Canton spatial plan. It remains to be seen whether the plant goes ahead in spite of this blow.

KAMENGRAD, 2 X 215 MW, FEDERATION OF BIH, BOSNIA-HERZEGOVINA

After years of vague plans for this project, a Memorandum of Understanding was signed at the China-CEE summit in Budapest on 27 November 2017 between Energy China International, Lager Group of Bosnia-Herzegovina, and the Federation of BiH government. The plant is at an early stage with no environmental assessment carried out yet, however local people have already started to oppose it. It would be built at a site where there is a coal mine but no existing power plant.

UGLJEVIK III LIGNITE POWER PLANT, 2 X 300 MW, REPUBLIKA SRPSKA, BOSNIA-HERZEGOVINA

Ugljevik III is promoted by Russian billionaire Rashid Sardarov's Comsar Energy. Comsar reported in 2013 that it had signed a construction contract with China's China Power Engineering and Consulting Group Corporation (CPECC). However in 2017 it was reported that negotiations with the company failed and no new contract has been signed.

Like Stanari, Ugljevik III would have a very low net efficiency of 34.1 percent. An analysis published by the Center for Environment also shows that the environmental assessment lacks key data and that the expected SO_2, NO_x and dust emissions are false. After a formal complaint was submitted to the Energy Community, in August 2017 a dispute settlement case was opened on the issue.

Ugljevik III is also currently under examination by the Espoo Convention due to Bosnia and Herzegovina's failure to notify neighbouring countries about the plant's transboundary impacts.

Before the October 2014 elections in BIH there was a flurry of activity around the project, with the Republika Srpska government declaring it a project of public interest and issuing a partial construction permit, but since then there has been little progress. In January 2016 the Republika Srpska government approved some controversial annexes to the concession agreement, stating that it would delay the implementation of EU environmental law for as long as possible, but in April 2016 it was reported that these may be revised again.

In mid-2017 the project appeared to be in jeopardy when the Supreme Court of Republika Srpska cancelled its environmental permit. However, the Ministry of Spatial Planning, Construction and Ecology responded by issuing another permit without repeating the environmental assessment. This new permit is now being challenged in court by the Center for Environment.

GACKO II LIGNITE POWER PLANT, 350 MW, REPUBLIKA SRPSKA, BOSNIA-HERZEGOVINA

After several Chinese companies had expressed interest in the project, in December 2017 a "general contract" was signed with China Machinery Engineering Corporation (CMEC) and Emerging Markets Power Fund. However, there is no sign of a tender having taken place so it is

not clear what the exact nature of the document is. At the signing, Minister of Energy Industry and Mining Petar Đokić stated that another agreement would soon be signed to form a project company. If so, this would be highly unusual in a region where Chinese involvement in coal plants was so far limited to construction contracts. The plant would be built at the site of the existing plant in Gacko but no environmental impact assessment has been undertaken yet.

Gacko II's feasibility study is highly questionable for three main reasons:

- EUR 18/tonne is mentioned in the study as a realistic coal price – yet the amount used in the calculation is much lower, around EUR 13.3/tonne.
- It foresees export of all the electricity generated, at a price of EUR 50/MWh, except in exceptional cases when 30% would be sold on the domestic market at EUR 19.90/MWh. There no evidence that the electricity would find a market and that it could be sold at this price - which is higher than the real export price in recent years. Moreover, the scenario including 30% of electricity being sold domestically is not even examined in the calculation – if it was it would show that the plant is unprofitable.
- A CO_2 price of EUR 5/tonne is mentioned in the text, but not included in the calculation. Even this very low CO_2 price would take the plant into the realm of unprofitability.

ROVINARI LIGNITE POWER PLANT, 600 MW, ROMANIA

Talks of plans for a new unit at Rovinari involving the China Huadian Engineering company have been going on for several years but the project has not received any significant permits. In early November 2014, a new joint venture company was set up between Huadian and Oltenia Energy Complex (CEO). Little has happened since then but the project is still mentioned publicly by the government.

In early December 2014 it was announced that the European Commission has opened an infringement procedure against Romania for failure to properly apply the environmental impact assessment directive when permitting the clearance of forest and expansion of lignite mining at the complex. In addition, 5 final decisions in the highest court in Romania cancelled the EIA permits for mine expansion.

MELITI II, 450 MW, GREECE

In September 2016, the Greek public power corporation PPC signed a Memorandum of Understanding with China's CMEC – the same company involved in Kostolac in Serbia – for the construction of a second unit at the Meliti power station near Florina. Since then, there has been little progress with the project but a new law on the sale of 40% of PPC's lignite assets in April

2018 included a licence for Meliti II. PPC is supposed to launch an international tender in May 2018 and the sale should be concluded by the end of the year, so only at that point will it become clear whether Chinese companies will really be involved.

4. OTHER ENERGY PROJECTS IN SOUTHEAST EUROPE WITH (POTENTIAL) INVOLVEMENT OF CHINESE COMPANIES

Chinese companies have expressed interest in a number of other energy projects in the region.

In Serbia, projects reported to have caught Chinese attention include the Radljevo lignite mine at the Kolubara mine complex, the Morava 2 lignite power plant, the Štavalj power plant and mine, as well as the Kovin energy complex and Nikola Tesla B3 lignite plant in Obrenovac. However, none of them are likely to go ahead before 2025 according to the 2017 implementation plan for the national energy strategy.

In Republika Srpska, BiH, Chinese company Sinohydro signed a deal with EFT to construct the 35 MW Ulog hydropower plant project on the river Neretva in September 2012, however the project did not go well. Some preliminary works on access roads started and in April 2013 a construction permit was issued for the main project, but then in early July 2013, within just four days of one another, two workers died in separate landslide incidents. Since then it has been reported that the project has been re-designed. In March 2018 EFT reported having signed a deal with Sinohydro to construct the plant.

A memorandum of cooperation between China's state-owned China National Aerotechnology International Engineering Corporation (AVIC) and Republika Srpska's Ministry of Energy was also signed in 2017 for the controversial 93.5 MW Buk Bijela hydropower plant on the river Drina near the Montenegrin border.

Chinese companies are also interested in the the 160 MW Dabar plant in Bosnia-Herzegovina, part of the larger Gornji Horizonti complex. Communities in the downstream Neretva delta in Croatia, as well as environmental NGOs such as WWF, say that the project would threaten wetlands and worsen salination of one of Croatia's most fertile agricultural areas.

Power China and the State Development and Investment Corporation (SDIC) are also reported to be interested in the controversial Morača dam project in Montenegro, which would endanger the spectacular Skadar Lake Ramsar site.

China has emphasised that it is also ready to invest in wind and solar but that the governments are generally not coming forward with such projects. However, there have been some concrete steps forward in this field. At the 2017 China-CEE summit in Budapest on 27 November 2017 in Budapest, an EPC contract with a 15-year maintenance agreement for the 48 MW Kupres 1 wind park was signed. In Croatia, Chinese company Norinco International Cooperation Ltd has also bought a share in a 156 MW wind farm project near Senj.

5. WHAT NEXT?

The region's companies and governments have ambitious plans, but it remains to be seen how realistic they are. Equity participation by Chinese companies is only planned in Rovinari and Gacko II, and the other projects are not likely to proceed without host country state guarantees. These add to public debt and may raise state aid issues, depending on the conditions of issuance.

The pressure on state resources is all the stronger given that the countries need to either close existing coal units or upgrade them to comply with the EU's Large Combustion Plants and

Industrial Emissions Directives (LCPD and IED). A 2013 study undertaken for the Energy Community estimated that IED compliance will cost Bosnia and Herzegovina EUR 374.7 million, Montenegro EUR 50.9 million and Serbia EUR 710.7 million.

The countries also need to meet renewable energy targets under the Energy Community Treaty and invest in energy efficiency measures. Both should be a higher priority than building new coal plants. Trying to cover new-build as well as rehabilitation costs, energy efficiency investments and upping the share of renewables may simply prove to be too expensive for the countries, all of which already have debt issues.

China has taken strong steps domestically, announcing the closure of around 1000 coal mines, a 3-year ban on opening new ones, and stopping construction of over 100 new coal plants with over 120 GW capacity. In 2015 it took steps to limit external coal investments too: In a joint statement with the US, China agreed to work towards strictly controlling public investment flowing into projects with high pollution and carbon emissions both domestically and internationally. However, with the change of US leadership the status of this agreement is uncertain.

In 2017, two years after the US-China joint statement, China's State Council and regulators (the NDRC, MOFCOM, MOFA and People's Bank of China) went on to adopt 'Opinions on Further Guiding and Regulating the Directions of Overseas Investments', which restricts *''overseas investments that are not in compliance with the relevant target jurisdiction's environmental protection, energy consumption or safety standards.''* All the Balkan projects mentioned in this briefing exhibit breaches of EU and national legislation on environment, state aid and/or procurement.

All of the projects represent a threat to the health and public finances of southeast European countries. They also threaten to further decrease EU ambitions in tackling climate change and decarbonising the economy once the Western Balkans countries accede. If the southeast European countries do not change course soon, the EU may find itself with another Poland on its hands.

Read more about coal in the Balkans:

Bankwatch.org/project/coal-in-the-balkans