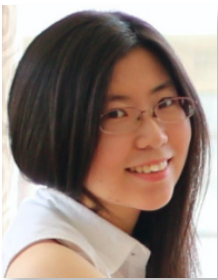


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Who Funds Overseas Coal Plants?

THE NEED FOR TRANSPARENCY AND ACCOUNTABILITY

XINYUE MA AND KEVIN P. GALLAGHER

As more and more countries make concrete domestic decarbonization commitments, it is paramount that national pledges aren't met by shifting fossil fuel investments overseas.

Inclusive global leadership is needed to accelerate the coal phase-out. The Group of 20 (G20) has an opportunity to commit to limiting all overseas fossil fuel financing, starting with overseas coal finance from the public and private sectors. They should also put in place policy frameworks for disclosure, transparency and just transitions to a low carbon global economy.

In a Communiqué¹ issued in May of 2021, the Group of 7 (G7) Climate and Environment Ministers took a step in the right direction by stating that "international investments in unabated coal must stop now." The G7 also committed "to take concrete steps towards an absolute end to new direct government support for unabated international thermal coal power generation by the end of 2021." The G7 failed to agree on a specific end date for phasing out coal, but the commitment to restricting international coal investment is a significant step since the Organization for Economic Co-operation and Development (OECD) passed the Sector Understanding on Export Credits for Coal-Fired Electricity Generation² in 2015, which limited financing for unabated coal in official export credits.

¹ G7, 2021. G7 Climate and Environment Ministers' Meeting Communiqué. London, United Kingdom. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/988551/g7-climate-environment-comunique.pdf.

² OECD, 2015. Sector Understanding on Export Credits For Coal-Fired Electricity Generation Projects. [https://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=TAD/PG\(2015\)9/FINAL&docLanguage=En](https://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=TAD/PG(2015)9/FINAL&docLanguage=En).

Despite the lack of consensus on a coal exit date, the G7 used their new commitment to put pressure³ on China to also stop financing coal. While China is the last remaining public financier of overseas coal plants for sure, Chinese financing is involved in just 13 percent of the coal power capacity outside China that is operational or under development between 2013 and mid-2019 (17 percent of those in operation and 11 percent of those under construction or planning). According to independent research, the private sector from the G7 and other advanced economies make up the majority of overseas coal finance in the world economy.⁴ Rather than pointing fingers, the G7 should work within the G20, which includes China, and other forums to reign in public and private financing for coal, together.

The misconception about where the majority of new funding for overseas coal plants is coming from is partly due to a lack of transparent, reliable, systematic and comprehensive data on cross-border financial flows, and for coal fired power plants, in particular.

This policy brief aims to correct this knowledge gap and compares China's overseas coal finance relative to its public and commercial counterparts globally.

Three key takeaways are:

- **China is the largest public financier of overseas coal plants:** The Export-Import Bank of China and the China Development Bank accounted for US\$15.6 billion, or 50 percent of global *public* finance⁵ commitments in overseas coal fired power plants that reached financial closure between 2013 and 2018, or 40 percent by generation capacity.
- **But 87 percent of total (public and private) finance for overseas coal plants is funded by entities outside China:** Altogether, Chinese *public and commercial entities* (which include policy banks, state and privately-owned commercial banks and firms) financed 69 GW of overseas capacity, accounting for just 13 percent of the coal power capacity outside China that is operational or under development between 2013 and mid-2019 (17 percent of the total *overall* newly added coal fired power generation capacity outside China during the period, and roughly 11 percent of the power generation capacity under construction or planning outside China).⁶
- **Clear and official estimates of non-Chinese international coal funding by the sources of finance are currently lacking:** According to independent research, Japanese and Western institutional investors and commercial banks are major financiers of international coal power abroad.⁷ While many of these commercial institutions have recently made ambitious climate commitments, better data disclosure on climate-related finance is needed for accountability and policy coordination.

³ Hook, Leslie, and Camilla Hodgson. 2021. "G7 Agrees to Stop Overseas Funding of Coal to Limit Global Warming." *Financial Times*, May 21, 2021. <https://www.ft.com/content/c9e68bec-cb73-4804-9a49-c3497645cf5a>.

⁴ Urgewald, 2021. Groundbreaking Research Reveals the Financiers of the Coal Industry. https://coalexit.org/sites/default/files/download_public/Financing%20GCEL%202020_Press%20Release_urgewald.pdf.

⁵ Refers to lending by national development banks and export credit agencies. Not including state-owned commercial banks, state-owned company investments, or insurance, which are considered commercial in nature though they are state-owned.

⁶ Some figures cited in public policy discourse have put China at a higher share of *overall* overseas coal plant finance. E.g. <https://qz.com/1760615/china-quits-coal-at-home-but-promotes-the-fossil-fuel-in-developing-countries/>. Those estimates (which some put as high as 70 percent) can only be approached if one adds Chinese public and state-owned commercial bank finance together in the numerator, with a denominator of cross-border public finance globally, not all coal power finance globally. In other words, Chinese public and commercially oriented state-owned banks in the numerator and all publicly financed coal plants in the denominator.

⁷ Urgewald, 2021. Groundbreaking Research Reveals the Financiers of the Coal Industry. https://coalexit.org/sites/default/files/download_public/Financing%20GCEL%202020_Press%20Release_urgewald.pdf.

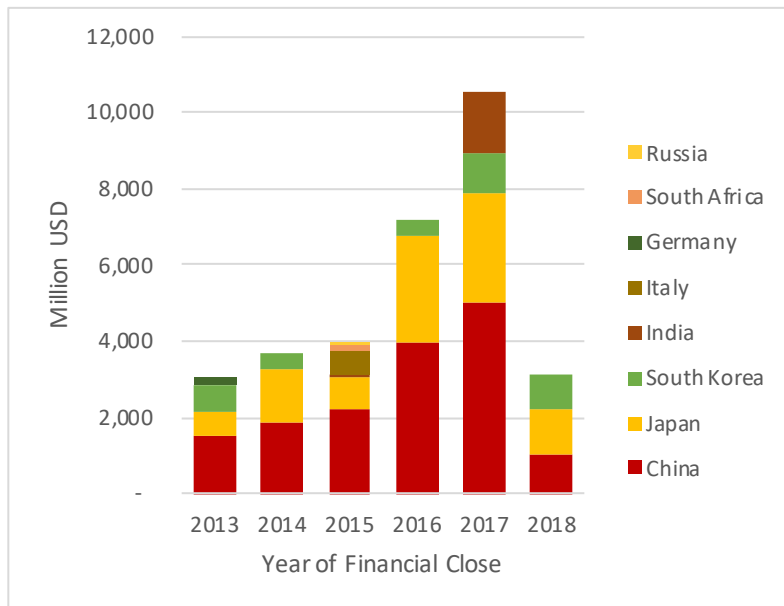


In addition to agreeing to phase out public and private overseas coal financing, the G20 should work to formalize global disclosure and transparency so the global community can properly track, monitor and hold public and private actors accountable to new commitments. They should also work to advance policy frameworks that ensure no worker, entrepreneur or community is left behind by coordinated financing phase outs of coal and subsequent fossil fuels.

China’s Role in Global Cross-border Public Finance for Coal Power Generation Outside China

Chinese public financing institutions that are seen as policy banks – the China Development Bank (CDB) and the Export Import Bank of China (CHEXIM) – have been the main Chinese providers of overseas coal finance.⁸ Relative to the world’s major public financiers,⁹ CDB and CHEXIM are also among the largest coal power finance providers globally. According to the [Global Coal Public Finance Tracker](#) (GCPFT) published by the [Global Energy Monitor](#), CDB and CHEXIM provided US\$15.6 billion, or 50 percent of the world’s cross-border public coal finance that reached financial closure between 2013 and 2018 (when latest data is available), followed by Japan (30 percent) and South Korea (11 percent), as shown in Figure 1 below.¹⁰

Figure 1: Cross-border Coal Power Public Finance by Source Country, Financial Close between 2013-2018



Source: Global Energy Monitor, Global Coal Public Finance Tracker (GCPFT).

⁸ Boston University Global Development Policy Center, 2020. Understanding China’s Global Power. <https://www.bu.edu/gdp/2020/10/19/chinas-global-power-database-policy-brief/>.

⁹ Refers to national development banks and export credit agencies. Not including state-owned commercial banks, state-owned company investments, or insurance firms. These are considered commercial in nature though they are state-owned.

¹⁰ The China numbers are different from what’s recorded in Boston University Global Development Policy Center’s China’s Global Energy Finance (CGEF) Database, because the years recorded in CGEF Database refer to the year the financing contract is signed, while GCPFT records it by the year of financial closure. For comparison purposes with other countries, we use the GCPFT data here, instead of the CGEF Database.

Public finance institutions of several Western countries, including the US, have withdrawn from all coal power projects that had been under consideration during this period.

In terms of generation capacity, Chinese public finance supported 16 GW, or 40 percent of the coal fired power generation capacity that reached financial closure between 2013 and 2018. Among them, about 3.5 GW is in operation, accounting for about 27 percent of all the operating coal power capacity supported by cross-border public finance; 12.5 GW is still under construction or planning, amounting to 47 percent of all coal power generation capacity under construction or planning that is supported by cross-border public finance, as shown in Table 1 below.

Table 1: Coal Power Generation Capacity with Cross-border Public Finance, Financial Closure between 2013-2018 (MW)

Source Country	China	Japan	South Korea	India	Italy	Germany	South Africa	Russia	Grand Total
Operating	3,462	6,185	1,993	-	770		300	125	12,835
Under Construction or planning	12,491	9,194	3,008	1,320		660			26,673
Grand Total	15,953	15,379	5,001	1,320	770	660	300	125	39,508

Source: Global Energy Monitor, Global Coal Public Finance Tracker (GCPFT).

If one adds the policy banks with state-owned commercial banks, China's share of global publicly financed coal plants gets even larger. There are some figures in the public policy discourse that have put China at a higher share of the world's overseas coal power finance. Those estimates (some as high as 70 percent) can only be approached if one adds Chinese public and commercial bank finance and state-owned enterprise investment together as a numerator, with a denominator of cross-border public finance globally, not all coal power finance globally. Even then, the total is only 62 percent.¹¹

Chinese Capital (Public and Commercial) in Coal Power Generation Outside China

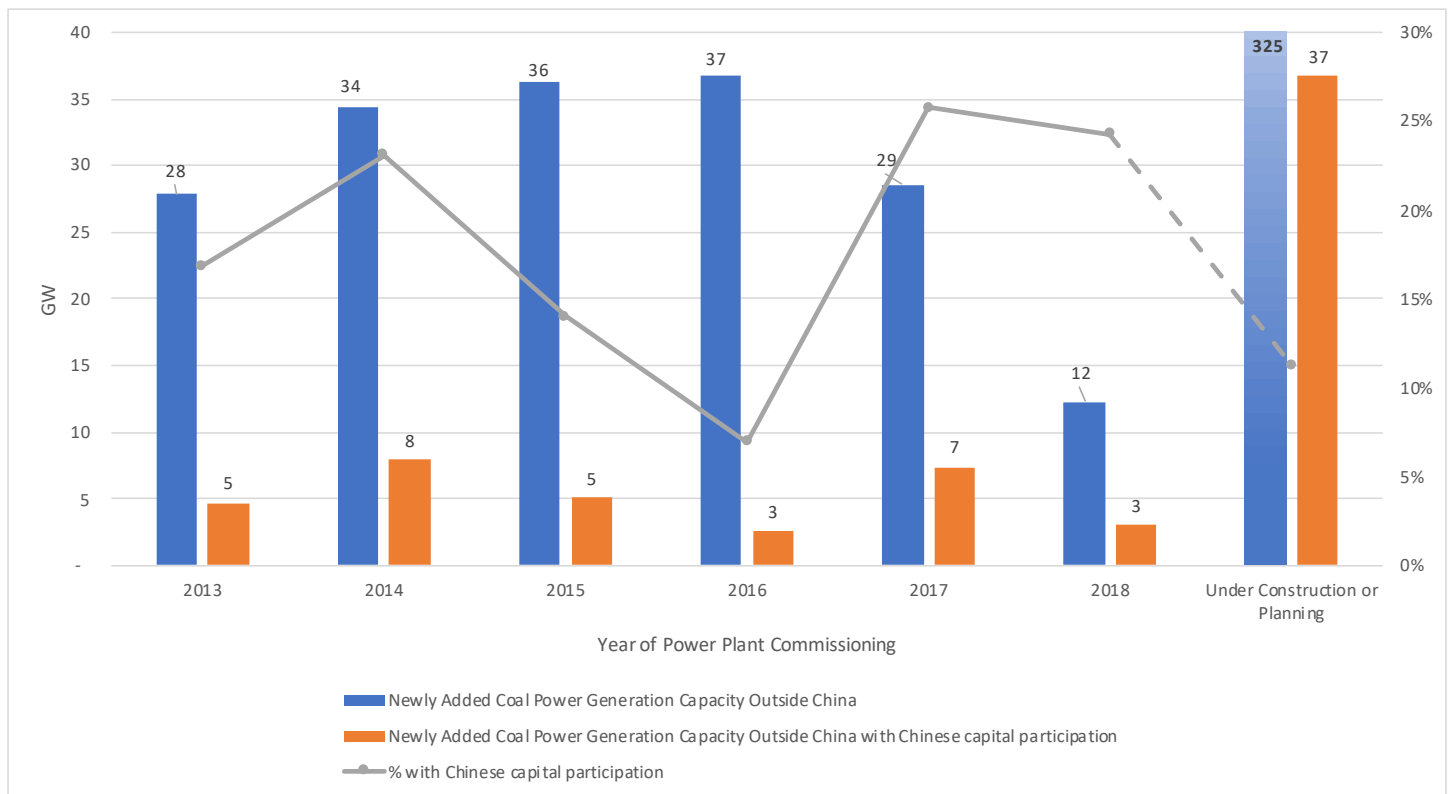
Available data¹² show that taking together public and commercial capital, between 2013 and mid 2019 (latest data available), newly added coal power generation capacity outside China reached 325 GW. The share of this total that is financed by various degrees of Chinese public and/or commercial entities including policy banks, commercial banks and equity investment adds up to 17 percent of all newly added coal fired power generation outside China during the period, or about 32 GW, as shown in Figure 2. For projects that are under construction or under planning, Chinese capital is participating in 37 GW, or 11 percent of all such coal power generation capacity outside China (see the bars on the far-right in Figure 2).

¹¹ Author's calculation according to the Global Coal Public Finance Tracker (GCPFT) published by the Global Energy Monitor.

¹² According to the [China's Global Power Database \(CGP Database\)](#) published by [Boston University Global Development Policy Center](#) and the [Global Coal Public Finance Tracker \(GCPFT\)](#) published by the [Global Energy Monitor](#). This includes overseas coal power generation with the participation of public and commercial loans and foreign direct investment from Chinese entities. The percentage of Chinese capital's participation varies from project to project.



Figure 2: Newly Added Coal Power Generation Capacity Outside China: All vs. With Chinese Capital Participation, 2013-2018



Source: Global Energy Monitor, 2020. Global Coal Public Finance Tracker (GCPFT); Boston University Global Development Policy Center, 2020. China's Global Power Database (CGP Database). S&P Platts, 2019. World Electric Power Plant Database.

Note: The "Under Construction or Planning" bars shown in the graph are not to scale: world total (blue bar) of those "Under Construction or Planning" is cut off by graph.

As the dollar amount information of all transactions is not complete, we are not able to measure the share of Chinese capital in the total coal power funding outside China during this period. However, its share by dollar amount would most definitely be lower than what is measured above by generation capacity with Chinese capital participation. This is because the full capacity of a coal plant is counted as long as a Chinese entity provided loans or investment, regardless of the size of Chinese investment in the project, which is usually less than 100 percent in most cases.

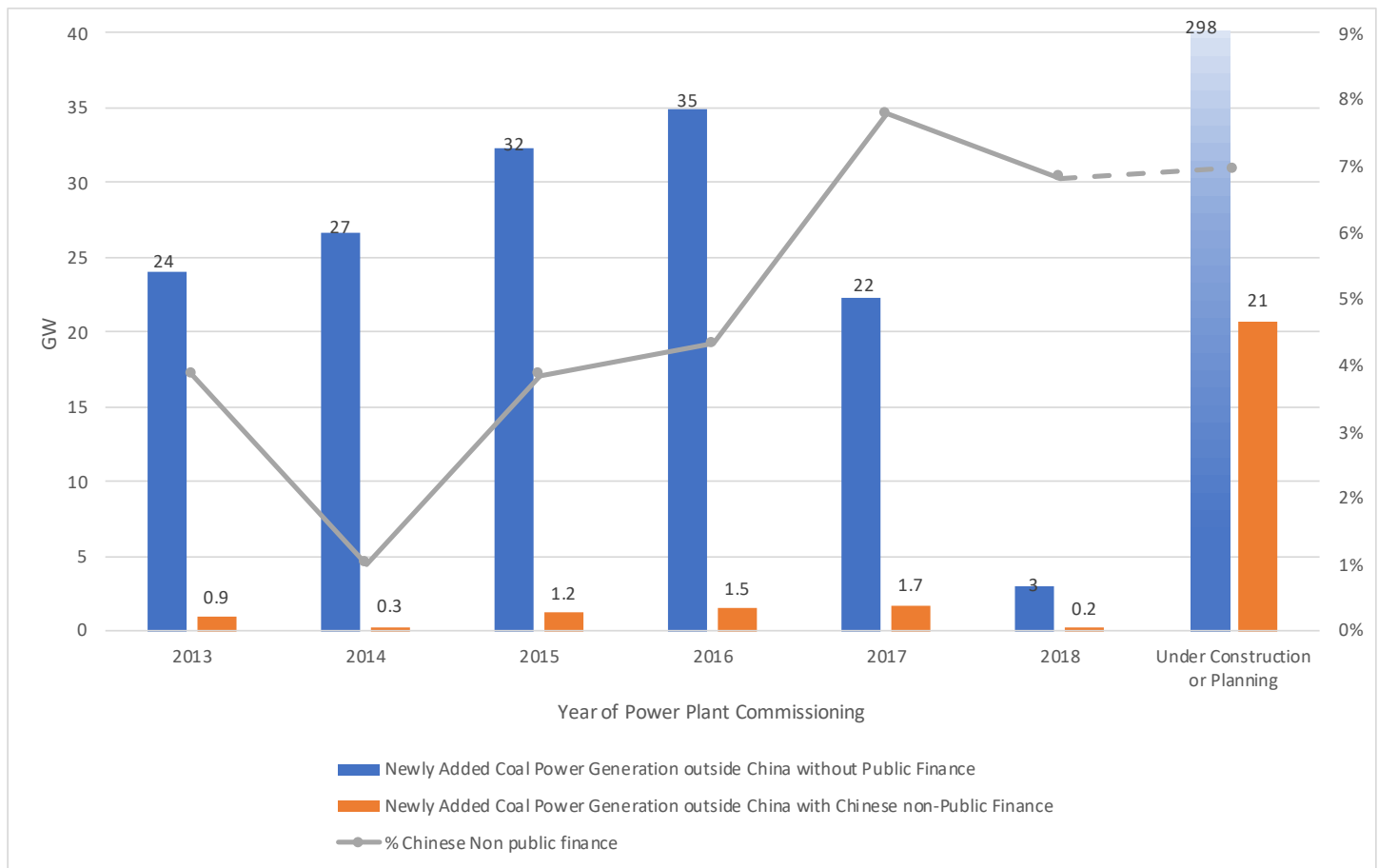
Who is Financing the Rest of the Coal Plants?

In the commercial sector,¹³ the weight of Chinese capital-funded coal power generation outside China is roughly 6 percent of the total, with some fluctuations over the years. Estimated by subtracting the power generation capacity with public finance participation from all the newly added coal power

¹³ Includes state-owned commercial banks, funds, and commercial companies' foreign direct investment. Does not include insurance.

plants outside China,¹⁴ Figure 3 below provides an estimate of commercial funding in the coal power generation sector outside China between 2013 and 2018.

Figure 3: Newly Added Coal Power Generation Outside China without Public Finance, 2013-2018



Source: Global Energy Monitor, 2020. *Global Coal Public Finance Tracker* (GCPFT); Boston University Global Development Policy Center, 2020. *China's Global Power Database* (CGP Database).

Note: the “Under Construction or Planning” bars shown in the graph are not to scale: world total of those “Under Construction or Planning” (blue bar) is cut off by graph.

The above calculations show that, unlike other estimates that have been cited, China was not the financier of the lion’s share of all newly added coal power capacity outside the country. However, clear and official estimates of the non-Chinese international coal funding by sources of finance are currently lacking.

¹⁴ (Also in Figure 3), the China share (orange bar) uses all newly added coal power outside China with Chinese non-public finance recorded in GCPFT and CGP Database between 2013 and 2018; the world total (blue bar) is estimated by subtracting the power generation capacity with public finance participation recorded in the GCPFT (integrating the China data from CGP) from all the newly added coal power plants outside China. Due to the scope of the GCPFT, the subtracted non-China public finance will only include projects that reached both financial close and commissioning between 2013-2018. There will likely also be non-Chinese public finance projects that were commissioned during this time but had reached financial close before 2013 (which is calculated in the China share) that is not available in the databases and not calculated. Therefore, actual amount of the world total (blue bar) is most likely smaller, and the China share in these five years would likely be more than 6 percent.



According to more recent data collected and published by a group of non-government organizations (NGOs), Japanese and Western institutional investors and commercial banks are major financiers of the *coal industry worldwide*.¹⁵ The research found that as of January 2021, with shares and bonds in value of US\$602 billion, US investors collectively account for 58 percent of institutional investments in the global coal industry, led by mutual fund company Vanguard (US\$86 billion) and asset management firm BlackRock (US\$84 billion), as shown in Table 2 below.

Table 2: Top Ten Investors (2021 January or most recent filing date)

	Investor	Country	Bonds (USD million)	Shares (USD million)	Total (USD million)
1	Vanguard	United States	11,840	74,012	85,852
2	BlackRock	United States	4,692	79,663	84,355
3	Capital Group	United States	2,021	36,330	38,351
4	State Street	United States	1,366	31,138	32,505
5	Government Pension Investment Fund (GPIF)	Japan	3,003	26,080	29,083
6	T. Rowe Price	United States	1,099	14,337	15,436
7	Fidelity Investments	United States	3,679	11,179	14,857
8	Government Pension Fund Global	Norway	2,308	12,264	14,572
9	JPMorgan Chase	United States	2,351	11,881	14,232
10	TIAA	United States	6,877	6,952	13,829

Source: Urgewald, 2021. Groundbreaking Research Reveals the Financiers of the Coal Industry.

Investors from Japan and the UK respectively account for the second and third highest share of institutional investments in the coal industry, as seen in Figure 4 below.

Figure 4: Country Break-down of Institutional Investment in the Coal Industry, as of January 2021 or most recent filing date



Source: Urgewald, 2021. Groundbreaking Research Reveals the Financiers of the Coal Industry.

The Urgewald study also found that between October 1, 2018 and October 31, 2020, commercial banks from Japan (US\$76 billion, 23.5 percent), the US (US\$68 billion, 21 percent) and the UK (US\$22 billion, 7 percent) were the top lenders to the coal industry. Taken together, commercial banks from these three countries accounted for 52 percent of the total lending to the world's coal companies. The top three lenders are the Japanese banks Mizuho (US\$22 billion), Sumitomo Mitsui Banking Corporation (US\$21 billion) and Mitsubishi UFJ Financial Group (US\$18 billion). The fourth

¹⁵ Urgewald, 2021. Groundbreaking Research Reveals the Financiers of the Coal Industry. https://coalexit.org/sites/default/files/download_public/Financing%20GCEL%202020_Press%20Release_urgewald.pdf

and fifth largest lenders to the coal industry are Citigroup (US\$13.5 billion) and Barclays (US\$13.4 billion), as shown in Table 3 below.

Table 3: Top Ten Lenders to the Coal Industry, Oct 2018-Oct 2020

	Bank	Country	Loans (USD million)
1	Mizuho Financial	Japan	22,244
2	SMBC Group	Japan	21,222
3	Mitsubishi UFJ Financial	Japan	17,929
4	Citigroup	United States	13,508
5	Barclays	United Kingdom	13,396
6	Bank of China	China	8,767
7	Bank of America	United States	8,471
8	JPMorgan Chase	United States	7,761
9	BNP Paribas	France	7,421
10	Wells Fargo	United States	6,266

Source: Urgewald, 2021. Groundbreaking Research Reveals the Financiers of the Coal Industry.

Combining this data with the Global Coal Exit List,¹⁶ which records country locations of each company's coal power installation and expansion plans, as well as research on the international commercial banks and institutional investors' investment in Chinese coal companies, it appears that these commercial institutions are the main players in general cross-border coal power finance, and outside China, as well.

However, the existing data do not give us a clear handle on the exact sizes of the coal power finance by source, destination and their corresponding power generation capacity, that could be comparable to the public finance and Chinese finance mentioned above. Even though, over the past year, many of these commercial institutions have made ambitious climate commitments, better data disclosure on climate-related finance is needed for accountability and policy coordination.

Policy Recommendations

Confusion over the underlying facts can lead to poor policy design, conflict and contention. Given that coal finance is an important priority for global decarbonization, it is paramount that data on coal finance be disclosed and available to the public in a transparent manner. It is equally paramount that private sector finance for coal be addressed, especially in the advanced economies. With an agreed set of data and leadership in phasing out private sector finance, Western countries would have more authority to negotiate with China and other financiers of coal in good faith and legitimacy.

There are some indications that trends are moving in the right direction, but they are not compulsory or ambitious enough. The private sector has recently made significant bottom-up commitments to climate ambitions. Since 2020, the top **Japanese banks** have made statements to put more conditions on lending to coal projects; many top US banking heavyweights have announced **2050 net-zero targets** for their financing activities. Ahead of the Leaders' Summit on Climate in April 2021, some

¹⁶ Urgewald. 2021. Global Coal Exit List and Finance Data. <https://coalexit.org/finance-data>.



of the top investors of coal joined the “[Net Zero Asset Managers](#)” initiative, promising to work with clients to reach net zero emissions by 2050 or sooner and set 2030 emissions reduction targets.

In China, over 30 [central state-owned enterprises](#) have announced climate-related targets and action plans; the [State-owned Assets Supervision and Administration Commission](#) is said to be drafting implementation guidance for these enterprises. The country also recently restricted the ability of “clean coal projects” to be included in Green Bond classifications. What is more, the Industrial and Commercial Bank of China (ICBC) recently announced it will put forth roadmaps and timetables to withdraw from coal financing as well.¹⁷

For the US, President Joe Biden’s recent Executive Order on Climate-Related Financial Risk is a step in the right direction. The US investment and banking community will have to begin disclosing their exposure to stranded assets, such as coal plants, which is a first step toward restricting US commercial investment in the sector.¹⁸ Financial regulatory agencies across the [EU](#), [Japan](#) and [China](#) are also starting to plan for climate change policies, such as climate disclosure rules, green finance incentives and climate risks reporting. These parallel steps can be built upon toward more concrete limitations of overseas coal finance in the world economy.

Nevertheless, these actions have a [long way to go](#). To accelerate these efforts to their proper level of ambition, the G20 should make parallel commitments to regulating their overseas commercial and public investment in coal. Without a clear and official understanding of the underlying facts however, empty pledges and finger pointing will prevail. Therefore, the G20 should also put in place official tracking systems of transparency that ensure proper disclosure and understanding of cross border fossil fuel financial flows. Finally, a core tenet of all such action should be financing and policy frameworks to ensure that no one is left behind when financing is shifted. Behind every stranded fossil fuel asset is a stranded worker, community, entrepreneur and fiscal balance sheet. Frameworks needs to be in place to ensure that not only finance shifts toward cleaner alternatives, but people do, too.

¹⁷ State Council, 2021. 《绿色债券支持项目目录（2021年版）》. http://www.gov.cn/zhengce/zhengceku/2021-04/22/content_5601284.htm.

¹⁸ White House (2021), Executive Order on Climate-Related Financial Risk, United States, <https://www.whitehouse.gov/briefing-room/presidential-actions/2021/05/20/executive-order-on-climate-related-financial-risk/>.

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The Global China Initiative (GCI) is a research initiative at Boston University's Global Development Policy Center. The GDP Center is a University wide center in partnership with the Frederick S. Pardee School for Global Studies. The Center's mission is to advance policy-oriented research for financial stability, human wellbeing, and environmental sustainability.

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The views expressed in this Policy Brief are strictly those of the author(s) and do not represent the position of Boston University, or the Global Development Policy Center.

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