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World Bank helps develop Asia's Largest Coal Field:

How the World Bank's coal road map leads Pakistan into a debt spiral and undermines the Paris Climate Agreement

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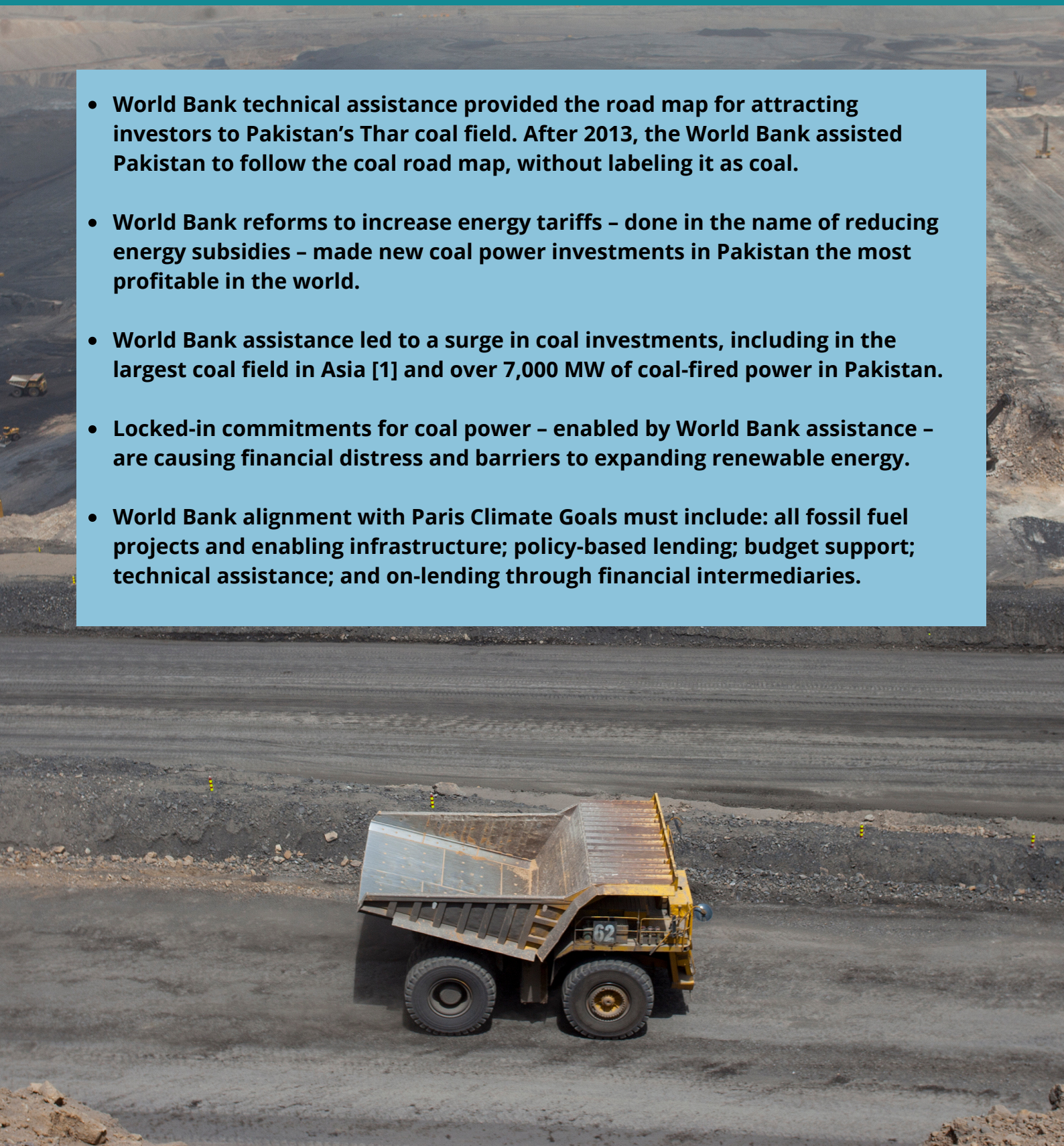

- **World Bank technical assistance provided the road map for attracting investors to Pakistan's Thar coal field. After 2013, the World Bank assisted Pakistan to follow the coal road map, without labeling it as coal.**
- **World Bank reforms to increase energy tariffs – done in the name of reducing energy subsidies – made new coal power investments in Pakistan the most profitable in the world.**
- **World Bank assistance led to a surge in coal investments, including in the largest coal field in Asia [1] and over 7,000 MW of coal-fired power in Pakistan.**
- **Locked-in commitments for coal power – enabled by World Bank assistance – are causing financial distress and barriers to expanding renewable energy.**
- **World Bank alignment with Paris Climate Goals must include: all fossil fuel projects and enabling infrastructure; policy-based lending; budget support; technical assistance; and on-lending through financial intermediaries.**

This is the story of how the World Bank's public assistance is behind the on-going development of Asia's largest coal field – Pakistan's Thar coal field and associated new coal power plants.

Most individuals reading this first sentence might think: how can this be? According to the World Bank, it is a climate champion and has not financed coal since its 2013 no coal finance pledge. However, this story reveals the reality of the World Bank's dirty little coal secret.

To begin to understand the coal reality, one needs to understand that as a public development bank, the World Bank's fundamental role is to attract investors to developing countries – both public sector investors and private sector investors.

To attract investors, the World Bank uses its public assistance to: 1.) **increase profit margins** of projects; and 2.) **de-risk investments** to enhance both the return on investment (public and private equity financing) and the ability to pay back lenders (public and private debt financing).

There are several ways the World Bank's public assistance is used to increase profit margins and de-risk investments, including:

1. **Direct public finance of projects** (World Bank provides more favorable terms than commercial finance, e.g., longer payback periods, grace period during construction);

2. **On-lending through financial intermediaries** (e.g., World Bank makes more capital available through commercial banks and equity funds);

3. **Direct public finance of enabling infrastructure** (e.g., transmission lines to evacuate power from newly built power plants);

4. **On-lending through government budget support** (e.g., allows a government to provide public finance through loans, equity or guarantees to projects);

5. **Favorable policy reforms** (e.g., tax breaks, quicker permitting, higher tariffs); and

6. **Technical Assistance** (data gathering, feasibility studies, drafting of policies/regulations, marketing, transaction advisory, etc.)

The World Bank employs a combination of many of the above public assistance types to attract investors into a particular economic sector, such as the energy sector.

When the World Bank announced in 2013 that it would no longer finance coal power plants – it was only talking about direct project finance. Many people did not understand that the no coal pledge did not include the other five types of World Bank public assistance listed above.

The following paper explains how the World Bank provided a patchwork of different forms of public assistance to attract billions of dollars into the Thar coal field and new coal power plants in Pakistan.

The World Bank's Energy Sector Engagement Prior to 2013

The World Bank has had extensive involvement in the energy sector of Pakistan for many decades. At least as far back as 1985, the World Bank helped the government of Pakistan develop a long-term energy development strategy that centered on bringing private investors into power generation.[2] Attracting private sector investors in Pakistan's energy sector remains a primary World Bank objective to this day.

In the late 1980s and early 1990s, the World Bank was the main architect in the development of the first independent power producer (IPP) in Pakistan, Hubco. Today, Hubco is Pakistan's largest IPP and equity investor/owner in three of the new Thar coal-to-power projects (see Annex Table).[3]

Technical Assistance and Large-scale Coal Development in Pakistan: In 2009, coal mining and coal power was largely nonexistent in Pakistan. There was just one small 150 MW coal power plant. In May 2009, the World Bank started its $30 million Thar Coal and Power Technical Assistance Project in Pakistan.

The World Bank's assistance aimed to provide a road map for "large-scale coal-to-power development" of the Thar coal field in Sindh province. It put in place all the critical building blocks for coal development in Pakistan and for which subsequent World Bank assistance continued to push forward long after the Bank's 2013 no coal pledge.

The Thar coal field is the largest coal field in Asia and one of the largest in the world totaling over 175 billion tonnes of lignite coal.[4] Lignite is the worst possible energy source for the climate crisis. Out of all fossil fuels, lignite causes the highest CO2 emissions per ton burned, one third more than anthracite coal (hard coal).[5]

In 2009, the World Bank's Thar Coal project appraisal document explained that even though the government of Pakistan had signed Memoranda of Understanding with a state-owned group from China, no coal-to-power projects for the Thar coal field had been done.[6]

The Bank stated that part of the reason no coal projects had been done was due to: 1.) the government's desire to limit the size of the power plant; 2.) the lack of physical infrastructure; and 3.) insufficient technical information, including on subsurface water in Thar and built-out plans for the Thar coal blocks (which could be assisted by obtaining geophysical data).[7]

In addition, the World Bank elaborated that "the government must address investors' perceived excessive risk in investing in large-scale coal mining and coal-to-power development in Pakistan **due to low power tariffs and large subsidies.**"[8] The Bank further noted that "the government will work towards establishing **a tariff that would be able to attract new investment** [into Thar coal-to-power]...**ensuring that tariffs are sufficient to cover generating costs and return on investment.**"

According to the Bank, the expected technical assistance outcomes would be, inter alia:

• Implementation of enabling policy, legal, and regulatory frameworks; and
• Qualified investors are attracted to Thar Block I

By March 2010, at least thirteen procurement contracts had been signed to assist in obtaining the above expected outcomes. Some of the largest contracts in terms of dollars, included:

- $500,000 for geophysical data of the Thar coal basin.[9] As stated above, this would provide the needed information for coal block built out plans and subsurface water information;
- $320,000 for international legal consultant on the enabling policy frameworks [10];
- $187,000 for mining consultant [11];
- $152,000 for pumping tests;
- $146,000 for international water consultant;
- $110,000 for Transaction Advisor [12]; and
- $103,000 for environmental consultant.

The World Bank's website only discloses thirteen procurement contracts worth $1.7 million. It is unclear what happened to the other $28 million of the technical assistance or how much was ultimately dispersed.[13]

Furthermore, it is not possible to determine the measures contained in the World Bank-assisted enabling policy frameworks for coal investment because the World Bank does not disclose any advice that has been provided through the World Bank-financed consultants.

Transaction Advisor: It is important to highlight the significance of the World Bank's Transaction Advisor. This advisor is in charge with putting investment deals together and ultimately ensuring that the deal reaches financial closure.[14] Transaction advisors market the projects to potential investors, get all the financial actors on board, ensure permits are getting approved on time, and importantly handles negotiations between the government, the developers, the Banks, and other multi- and bi-lateral finance. For the Thar Coal assistance, the Bank stated:

> "The objective of [the transaction advisory services] component is to provide expert advisory services to help attract quality private investors to develop **Thar Block I**. Preparation for this transaction will include consideration of the **investment role of IFC** [International Finance Corporation – the private sector arm of the World Bank Group] **and other IFIs** [international finance institutions] to be reflected in the bidding documents."[15] [emphasis added]

In addition, the World Bank indicated that the methodology and capacity created under the Thar Block I transaction "will assist the government in structuring future coal-to-power transactions."

Coal becomes too controversial for the World Bank: In April 2010, the World Bank provided a US$3.75 billion loan to Eskom's 4,800 MW Medupi coal power plant in South Africa. This World Bank coal assistance received considerable push back from the Board of Directors, mainly from the US, UK, Italy, Norway and the Netherlands.[16] As a result, the World Bank said it would be its last coal power plant financed. In 2013, the World Bank's Energy Sector Directions Paper committed that the institution would no longer finance coal power plants. However, this commitment only applied to direct World Bank finance and not to other forms of Bank assistance (e.g., policy-based lending, technical assistance or financial intermediaries).

In January 2013, the World Bank's website listed the Thar coal technical assistance operation as dropped. It was reported by Pakistan media that the Bank stated "it was not in a position to continue with the Thar coal and power project because of their policy of focusing on low carbon technologies."[17]

The World Bank's technical assistance provided the road map for attracting investment into Pakistan's Thar coal field. After 2013, the World Bank assisted Pakistan to follow that coal road map, without labeling it as coal.

The World Bank's Continued Public Assistance to Coal

After dropping the Thar Coal technical assistance project, the World Bank still made good on its expected outcomes to implement enabling policies for large-scale coal development and to attract qualified investors to Thar Block I. In fact, the World Bank's coal assistance went well beyond Thar Block I.

Post-2013, the World Bank was careful not to associate the word "coal" with its public assistance operations in Pakistan. Coal is never again mentioned in World Bank operation documents. But there is no doubt, the World Bank's post-2013 assistance closely followed the road map set out by the Thar Coal-to-Power technical assistance as explained below.

It is also important to highlight, while the World Bank was looking for ways to attract coal investment into Pakistan, Chinese investors were already lined up. In May 2013, the Chinese Premier announced the China Pakistan Economic Corridor (CPEC) program, which later became a showcase of China's Belt and Road Initiative (BRI). **The CPEC program's near-term priority projects included five Thar coal-to-power projects, including Thar Block I** (see Annex Table). As such, the CPEC program also showcased the World Bank's public assistance accomplishments.

Between 2016 to 2020, at least six Thar coal-to-power projects, involving coal mining and 3,240 MWs of coal-fired power generation, reached financial closure. The World Bank's post-2013 assistance is linked to all six projects (see Annex Table).

World Bank on-lending through Financial Intermediaries: As mentioned above, the World Bank's Thar technical assistance considered the investment role of the IFC (the World Bank's private sector arm).

In April 2015, **IFC invested US$75 million in equity and provided a US$150 million loan to Habib Bank Ltd.** of Pakistan. Habib Bank subsequently invested equity in and/or provided debt finance (loans) to five Thar Coal-to-Power projects, including Thar Block I (also known as Shanghai Electrical) integrated coal mine-1,320 MW sub-critical power plant; Sindh Engro Coal Mining Company (Thar Block II); and three sub-critical coal power plants totaling another 1,320 MW (all supplied by Thar Block II). Notably, these are the same five priority projects of the CPEC program in the Thar coal field and as such, involve substantial Chinese investment (equity and finance). See Annex Table for additional details.

In addition, in December 2014, **IFC invested US$66 million in equity in Bank Alfalah Ltd.** (BAFL) of Pakistan, which equaled 18% of the bank's equity shares.[18] Bank Alfalah subsequently provided debt financing (loans) to at least two of the Thar Coal-CPEC projects (see Annex Table).

IFC Technical Assistance: Between 2013 to 2017, four of the local Pakistan banks that provided financing to Thar Coal-to-Power projects also received advisory services/technical assistance from the IFC, including: Habib Bank Ltd., Bank Alfalah Ltd., Meezan Bank, and United Bank Ltd. (see Annex Table).

IFC advisory services can be important to local banks which often lack the technical expertise to evaluate energy projects or how to price loans to such projects.[19] Before the Thar Coal projects, none of these Pakistan banks would have had experience in evaluating coal power projects.

Unlike the World Bank's technical assistance to governments, the IFC does not provide details or any procurement contracts of its advisory services to commercial banks, only vague language on building capacity. The IFC often states the capacity is associated with small and medium enterprises (SME). However, the new enterprises created to develop the Thar Coal projects meet the IFC's SME definition, which is based on a small number of employees and low asset valuation.

World Bank finance of coal power-enabling infrastructure: In December 2017, the World Bank approved $425 million for the National Transmission Modernization Project (or NTMP) Pakistan with an end date of January 2024. According to the World Bank, the project "will support the [National Transmission and Dispatch Company] NTDC in carrying out its license and legal obligations by strengthening the NTDC grid **to accommodate the connection and transmission of new power generation**—two-thirds of it by private investors—and to supply the demand of DISCOs [distribution companies], thus contributing to end power shortages."[20] The connection and transmission of new power generation includes new coal power.

The World Bank's procurement plan included expansion and upgrading of 24 grid stations.[21] For example, the procurement plan specified new evacuation extensions for the Jamshoro grid station. This is the connecting grid station for the new 600 MW Jamshoro I coal power plant publicly financed by the Asian Development Bank and the Government of Pakistan (see Annex Table).

World Bank on-lending through government budget support: The World Bank provides budget support to governments through development policy finance (DPF) operations (see more details below). In 2014 and 2015, the World Bank provided US$1.1 billion in budget support to the government of Pakistan directed at the power sector (the operations were titled the First and Second Power Sector Reform Development Policy Finance).

Prior to 2014, government energy sector debt was often blamed for a lack of government investments in new power generation. In 2014, the government of Pakistan (GoP) was able to commit $380 million in equity to the Jamshoro I 600 MW coal power plant, which also received a US$1.3 billion loan from the Asian Development Bank (see Annex Table).

The GoP also provided hundreds of millions in guarantees for the Sindh Engro Coal Mining Company (Thar Block II), which reached financial closure in April 2016 (see Annex Table). It is reasonable to expect that the World Bank's $1.1 billion budget injection contributed to the GoP's new found finances for coal. By comparison, Pakistan's total federal budget for 2015-16 was approximately US$26.7 billion (4.451 trillion Pakistan rupee).

World Bank Coal-Enabling Policy Reforms – Investors follow the Profits

Arguably the most important World Bank action that attracted coal investors was the policy reforms that increased and guaranteed coal profits. As noted above, the World Bank's Thar Coal-to-Power technical assistance made one policy objective abundantly clear – **the key to coal investments in Pakistan is increasing tariffs in order to:**

1. **Ensure an adequate return on investment, i.e., big enough profits to attract investors; and**

2. **Reduce the level of government subsidies to improve government finances and, thereby, reduce revenue risks to new coal mining and coal power generation plants.**

Energy sector circular-debt: For more than a decade, Pakistan energy sector circular-debt has curtailed investment in power generation by both the government and other potential power sector investors. This lack of investment in new power generation resulted in acute electricity shortages in Pakistan, which was still the case in 2013.

A major component of the energy sector's circular-debt is late or unpaid subsidies by the government. The subsidy payments are meant to compensate power distribution companies for selling electricity to consumers below the rate that the distribution companies must pay to the power generators. As a result of unpaid subsidy payments coupled with poor bill collection rates and distribution losses, the distribution companies are often unable to sufficiently pay power generators. This leads to the power generators not being able to pay their fossil fuel suppliers (coal, oil or gas), and, hence, the term "circular-debt".

The World Bank's suggested solution was to reduce government subsidies and provide adequate profits to attract new coal investors – both of which would be done by increasing consumer tariffs.

World Bank Development Policy Finance: The World Bank provides budget support to governments through development policy finance (DPF) operations. However, in order for governments to receive this budget support, they must first implement a set of policy reforms or Prior Actions agreed upon with the World Bank. In some cases, World Bank DPF operations and policy reforms target specific sectors. In 2014 and 2015, the World Bank's DPFs targeted the power sector of Pakistan.

In May 2014, the World Bank provided Pakistan with $600 million in budget support under the First Power Sector Reform DPF. One of the World Bank-required policy reforms (Prior Action) was the approval of the Tariff and Subsidy Policy Guidelines that set multi-year power tariffs and guide overall tariff structure by the National Electric Power Regulatory Agency (NEPRA). The NEPRA tariff guidelines define how to set the applicable tariff based on all the costs and financial and fiscal incentives.

The tariff structure is arguably the most important provision of the power purchase agreement (PPA) and most important incentive for investors. The specific tariff structure, which determines the price the off-taker (i.e., government of Pakistan's Central Power Purchasing Agency, CPPA) is going to pay for the electricity is incorporated in the PPA and remains at that tariff structure for the life of the PPA, usually 20 or more years.

NEPRA sets the tariff structure that is incorporated into the PPAs and ultimately incorporated into the overall tariffs paid by consumers. In the World Bank-required NEPRA Tariff and Subsidy Policy Guidelines, the two main components of fossil fuel-based or thermal power-based tariffs include: 1. Energy Payments, and 2. Capacity Payments.[22]

Energy Payments cover variable fuel costs (e.g., coal, oil or gas) and other variable operations costs for the amount of power that is actually dispatched to the off-taker. However, after 2013, most new coal and gas power plants in Pakistan have take-or-pay fuel contracts, i.e., guaranteed fuel off-take agreements. In these cases, fuel becomes a fixed cost and is incorporated into the capacity payments, see below.

Capacity Payments cover the fixed costs of a power project (mainly debt servicing, fixed operations and maintenance, and insurance) plus a **rate of return to the project investors or return on equity (ROE)**. The capacity payment applies to a set amount of capacity of a thermal power generation facility that is made available to the off-taker (e.g., Government of Pakistan), regardless of whether the electricity is used or not.

The capacity payment tariff structure offers both security and risks to the government. Security in the amount of available electricity and risk in potentially paying for un-used electricity if power demand falls short. The cost of un-used electricity either has to be paid by the government or passed onto the end consumers – neither option is good.

A newly built thermal power project benefits from fixed capacity payments because such payments ensure smooth debt/loan repayment and guarantee profit/Return on Equity (ROE) regardless of how much the power plant is actually dispatched.

Pakistan's newly adopted tariff structure required by the World Bank DPF for thermal power projects is considered an upfront tariff, which works the same way as a feed-in-tariff commonly used to support renewable energy. The tariff is not based on competitive bidding. All new coal power plant PPAs, as well as oil and gas, are based on the pre-determined upfront tariff with guaranteed rates of return on equity (ROE).

Given the fixed costs largely cannot be changed by the regulator, i.e., NEPRA, **the main component of the tariff set by NEPRA is the allowable rate of return on equity – the profit.**

Upfront Coal Power Tariff Determination

NEPRA determines the allowable rate of return on equity (ROE) – the profit

NEPRA Power Purchase Cost = Energy Payment (variable costs*quantity of power) + **Capacity Payment** (fixed costs + **ROE**) + Transmission Charge

Government subsidy + consumer tariff = NEPRA Power Purchase Cost

World Bank-supported Tariff Reforms drive Coal Investments: In June 2014, there were still no PPAs signed for new coal power generation projects, including for the Thar coal field.[23] At the time, the World Bank would have been negotiating the new Prior Actions/policy reforms for release of the funding for the next Power Sector Reform DPF. This means the World Bank would have been paying close attention to government actions in the energy sector, especially with regards to tariffs.

In June 2014, NEPRA significantly increased the ROE for coal-fired power plants, especially for Thar coal-fired plants. At the time, **NEPRA announced that "This is the most attractive upfront tariff for coal-fired power projects in the world.**" [24] For Thar coal-fired power plants, the ROE was changed from up to 20 percent to an astounding 30.65 percent – "the highest return on any type of investment in Pakistan's history."[25]

In addition, the ROE for non-Thar local coal-fired power plants increased from 17 percent per year to 26.5 - 29.5 percent; and from 20 percent for plants using imported coal to 24.5 - 27.2 percent.[26]

In November 2015, the World Bank approved US$500 million for the second Power Sector Reform DPF in Pakistan. Two World Bank Prior Actions focused on NEPRA's tariff setting guidelines, including: to reduce [fiscal year] FY2014-15 electricity subsidies to 0.8% of GDP; and to maintain national uniform tariffs while ensuring cost recovery (note: part of cost recovery is the guaranteed return on investment or ROE and eliminating the government subsidy).

While no Prior Actions directly mention new upfront coal tariffs, the high ROE for coal was approved before the second DPF funding was released and was implicit in the Bank's requirement that tariffs "ensure cost recovery". Furthermore, the high ROE specifically for the Thar-based power plants follows the Bank's technical assistance advice on how to attract coal investors.

Moreover, the IFC's $140 million in equity to financial intermediaries that provided finance to at least five Thar coal power projects (see above) took place after the 2014 ROE increase for coal power.

The CEO of the Sindh Engro Coal Mining Company (Thar Block II coal mining project) told the media that the return on investment for coal power offered by the government of Pakistan was much higher compared to global rates.[27]

Consumer subsidies turned into producer subsidies: A higher-than-normal return on investment is a subsidy for which the government and/or consumers pay (see the increase in subsidies below). By requiring increased power tariffs in order to reduce subsidies and to cover the higher-than-normal ROE for coal, the World Bank is reducing subsidies paid to consumers of energy while providing new subsidies paid to the producers of coal power. Such policy reforms directly undermine the goals of the Paris Climate Agreement.

In fact, since 2016, the World Bank-induced higher energy tariffs not only launched the development of the Thar coal field – the largest coal field in Asia – but also spurred at least 7,200 MWs in new coal-fired power generation. All five of the Thar coal power plants in the Annex Table were approved under the 2014 ROE increases, equaling 3,240 MW of new coal power plants. In addition, at least three imported coal power plants were also approved under the new 2014 ROE levels, equaling another 3,960 MW of new coal power (Sahiwal, Port Qasim, and Hub coal power projects). Seven of the power plants were CPEC priority projects and one received $1.3 billion in public finance from the Asian Development Bank.

In summary, Pakistan's tariff reform that made coal investments the most profitable in the world followed World Bank advice and took place during two World Bank energy sector policy reform operations (2014-2016) that focused on tariff reforms. Additionally, the World Bank provided finance to local banks financing coal projects; provided finance for power lines and sub-stations to accommodate new coal power; and injected $1.1 billion into the government's budget. There is no room to deny that World Bank assistance led to a surge in coal investments and, thereby, tied Pakistan to a coal-intensive development path.

Unsustainable Capacity Payments threaten Pakistan's Financial Wellbeing

After years of electricity shortages, now Pakistan has too much power. The surplus power means power plants have low utilization rates coupled with high capacity payments. As a result, Pakistan's circular debt has swelled and threatens the country's financial wellbeing.

The high capacity payments and surplus power are directly linked to World Bank policy reforms, technical assistance and on-lending in the coal sector.

Pakistan's Energy Sector Financial Deterioration linked to World Bank assistance

surplus power capacity → low power plant utilization rates
(surge in new thermal power capacity linked to World Bank assistance for coal)
+
high capacity payments to thermal power plants
(linked to World Bank-induced tariff structure and tariff increases)
=
higher tariffs → higher subsidies → higher financial strain (worse circular debt)

According to NEPRA data, the overall thermal power capacity utilization rate (including coal, gas, LNG, and oil) was just 40% in FY2018-19 and dropped to a low of just 37% in FY2019-20.[28] The fixed capacity payments to Thar coal power plants are based on an assumed plant utilization rate of 85%.[29] This means the surplus in power is a very expensive burden on the government and power consumers in Pakistan. Coal power plants that may only be dispatching 40% are being paid for 85%, pushing up the average cost of electricity for everyone.

Prime Minister Imran Khan noted in April 2020 that fixed capacity payments to power generators could reach an entirely unsustainable level of US$9.2 billion (Rs1.5 trillion) per annum in the next few years as more such capacity payments are added.[30]

Unsustainable capacity payments are making Pakistan's circular debt problems significantly worse. Pakistan's circular debt has surged from US$2 billion (PKR 315 billion) in 2015 to beyond US$12.7 billion (PKR 2.2 trillion) in 2021.[31]

In March 2021, it was announced that power tariffs would have to rise 34% over the next two years, at the IMF's (International Monetary Fund) insistence, in order to help tackle the circular debt crisis.[32] This is on top of already a 15% increase in tariffs that was approved in February 2021.[33] Continuing to increase the power tariff threatens Pakistan's ability to offer affordable energy access and meet the UN's Sustainable Development Goal 7 for universal energy access by 2030. Despite the surplus of power, Pakistan's energy access deficit remains one of the highest in the world – over 50 million people do not have access. In 2019, Pakistan's electrification rate remained below 74%.[34]

Increasing Electricity Subsidies: Instead of reducing government subsidies by incorporating all generation costs into consumer tariffs like the World Bank had planned, the government has had to partially cover the capacity payments with higher subsidies to protect consumers and the broader economy from unaffordable and uncompetitive electricity prices. According to Power Minister, Omar Ayub, the government paid more than US$ 2.99 billion (PKR 470 billion) in power subsidies in 2020, a staggering increase from US$ 573 million (PKR 90 billion) in 2018.[35]

More coal capacity is on the way - at least another 3,330 MW of coal power is under construction (i.e., reached financial closure) and slated to come on-line between 2022 and 2023. By 2023, Pakistan is expected to have 50% more power capacity than is currently needed.[36] With all this new coal power, not only is Pakistan's financial wellbeing threatened, but also its climate commitments.

World Bank-assisted coal development undermines Paris Climate Goals

Since the UN Paris Climate Agreement (December 2015), the World Bank has helped to lead Pakistan down a very coal-intensive development path. Until 2016, Pakistan had only one small coal-fired power plant accounting for less than 1% of power generation. By 2020, Pakistan had five coal plants equaling 4,770 MW and as noted above, 3,330 MW of more coal is on the way.

While the World Bank has supported renewable energy development in Pakistan, so far it only accounts for a very small share and the growing fixed capacity payments to coal and gas power plants threaten further renewable energy expansion. According to the World Bank, despite Pakistan's huge potential for renewable energy, especially wind and solar, renewable energy's (excluding large hydropower) share is very small, comprising only 4% of installed capacity and 2% of power generation (as of the end of 2019).[37]

In December 2019, wind-power installations, which do not receive capacity payments, were curtailed in favor of coal and gas generation despite the fact that wind is the cheapest form of power generation and is supposed to be at "must run" status.[38] Existing wind power generators in the Gharo-Jhimpir wind corridor have reported financial difficulties due to curtailment of their output.[39]

Moreover, unfortunately Pakistan appears to be reducing previous targets for planned renewable energy generation. Pakistan's Alternative and Renewable Energy Policy (ARE Policy 2019) set targets for renewable energy's (excluding large hydropower) share of electricity generation at 20% by 2025 and 30% by 2030. However, Pakistan's new Indicative Generation Capacity Expansion Plan 2021-2030 (IGCEP) appears to be limiting renewable energy to only 10-12% of the electricity mix during this timeframe.

Furthermore, a 2020 World Bank-financed study on variable renewable energy (VRE) integration in Pakistan also concluded "achieving a least cost electricity mix in Pakistan would require a rapid expansion of VRE, reaching at least 20% of installed capacity by 2025, and at least 30% by 2030."[40]

However, Pakistan's capacity payment commitments to coal and gas power generation projects, which were enabled by World Bank assistance, appear to be holding back expansion of least cost renewable energy in Pakistan.

Conclusions and Recommendations

Many people will be surprised to find out that the World Bank still provides public assistance to coal. This assessment clearly shows that the World Bank's 2013 no coal pledge only applies to direct project finance and not all the other ways the World Bank provides public assistance.

From 2009 to 2012, the World Bank's technical assistance in Pakistan provided the road map to attract investors into Pakistan's coal sector. The World Bank's coal road map included advice on the necessary policies, including higher tariffs incorporating an attractive return on investment; advice not to limit the size of coal power plants; advice on financiers for Thar coal-to-power projects; and provision of geophysical data for coal development planning.

After 2013, the World Bank continued to assist this coal road map without labeling it as coal assistance. The World Bank financed transmission lines to evacuate power from new coal power plants; provided equity and loans to two local banks that helped finance five Thar coal-to-power projects (see Annex Table); provided $1.1 billion in government budget support targeted at the energy sector without any restrictions on coal expenditures; and instituted critical policy reforms for coal investments.

Arguably, the World Bank's most important actions were the tariff policy reforms. **The World Bank-induced higher upfront coal power tariffs made new coal power investments in Pakistan the most profitable in the world.**

The World Bank partially justified higher tariffs as a way to reduce subsidies and improve Pakistan's circular debt. However, as a result of exceedingly high profits (or ROEs) incorporated into tariffs for new coal power projects, subsidies and consumer tariffs have increased significantly – making Pakistan's troubling circular debt even worse and unsustainable for the government.

The high profit coal was an offer Chinese financiers could not refuse. Since 2013, the World Bank's public assistance played a critical role in attracting investors, mainly Chinese, to coal resulting in the development of Asia's largest coal field and over 7,000 MWs of new coal-fired power in Pakistan. Moreover, Pakistan's capacity payment commitments to coal and gas power projects, which were enabled by World Bank assistance, appear to be holding back renewable energy expansion. The World Bank's assistance tied Pakistan to a coal-intensive development path, which clearly undermines the goals of the Paris Climate Agreement.

In discussing the findings of this Pakistan assessment with the World Bank, the Bank has reacted with deflection – stating that they do not agree with the findings and that the World Bank has helped Pakistan diversify its energy sources by supporting renewable energy and gas.

While it is true the World Bank has provided assistance for non-coal energy sources in Pakistan, it does not cancel out or out compete the Bank's assistance and tariff reforms favoring coal.

In general, **the World Bank provides no oversight or acknowledgement of how World Bank policy reforms, on-lending through financial intermediaries, technical assistance, and budget support contribute to climate change.** As illustrated by this Pakistan assessment, all of these types of World Bank assistance are of enormous importance to enabling coal and other fossil fuel investments.

Every form of World Bank public assistance should be aligned with the goals of the Paris Agreement. However, currently the World Bank only lists direct project finance for coal and peat for the Paris Agreement Non-aligned Projects List.

The World Bank's Paris Agreement Non-aligned Projects List must include:

- **All fossil fuel projects (oil, fossil gas and coal)**, including financed through financial intermediaries.

- **All fossil fuel-enabling infrastructure**, including transmission lines to evacuate electricity from new fossil fuel-based power plants; pipelines; port facilities; and rail lines predominantly used to transport coal, gas or oil.

- **Activities aimed at facilitating fossil fuel investments, including technical assistance and policy-based finance.** Such activities, include, inter alia: procurement of geophysical data, transaction advisors, consultants (e.g., legal, financial, regulatory), and all policy reforms that directly or indirectly increase return on investment/equity for fossil fuel investments (e.g., favorable tax treatment; quick permitting; and increased tariffs or ROE-based tariffs).

- **All budget support to governments must have coal-, oil- and gas-associated activities listed as Excluded Expenditures in the financing agreement**. In the past, when the World Bank did not want to promote the expansion of nuclear power, the Bank required that nuclear power-associated expenditures had to be on an Excluded Expenditures list as part of the legal financial agreement for budget support. The same approach should be taken for fossil fuels.

- **Financial intermediaries must have all coal-, oil- and gas- associated activities in an Excluded Expenditures list included in all financial agreements with FI clients.**

Annex Table: World Bank Support to Thar Coal Field Projects

Project	Type / Status	Owners / Finance	World Bank-link / CPEC
Shanghai Electrical[41] (**Thar Block I**)	Integrated coal mine-power plant **1,320 MW sub-critical coal power plant**	Mining lease: Sino Sindh Resources Limited (SSRL)	WB-funded Transaction Advisor **CPEC Priority Project**
	financial closure – March 2020	Owner: Thar Coal Block-1 Power Generation Company, SPV of Shanghai Electric	WB-funded Transaction Advisor
	In-service: Aug 2022	Finance: US$478 million equity: Shanghai Electric	
		US$1.4 billion debt: Industrial and Commercial Bank of China (ICBC)	
		China Exim Bank	
		China Development Bank	
		Habib Bank Ltd.	April 2015: **IFC $75 million equity and $150 million loan**
Sindh Engro Coal Mining Company (SECMC)[42] – Thar Block II	**Coal mine**: 1.57 billion tonnes recoverable	Owners (equity): Government of Sindh (51% shares; $150 million) Engro Energy Ltd. Thal Ltd. (House of Habib) Habib Bank Ltd. HUB Power Co. (HUBCO) China Machinery Engineering Corp. (CMEC)	**CPEC Priority Project** Engro Corp. is a long time, active IFC client (20+ yrs); multiple finance to multiple Engro entities Habib Bank Ltd.- April 2015: **IFC $75 million equity and $150 million loan** 1990s World Bank actively involved in creating HUBCO and set up fund to develop HUBCO
	Phase I Financial closure: April 2016; First coal mined: July 2018	Finance: Mar 2013, **Gov. of Pakistan** $600 million guarantee for SECMC; and **Dec 2015 $200 million guarantee** to cover China Development Bank	World Bank Energy Sector Reform DPF budget support to Gov. of Pakistan: **$600 million May 2014 $500 million Nov 2015**
	Phase II Financial closure: Dec 2019	**April 2015: $500 million syndicate loan** Habib Bank Ltd	Habib Bank Ltd.- April 2015: **IFC $75 million equity** and **$150 million loan**
		Bank Alfalah Ltd. (BAFL)	Dec 2014: **IFC $66 million equity** in BAFL; 2012 & 2017 Advisory Services to BAFL
		United Bank Ltd. (UBL) FBL [Faysal Bank]	Oct 2015: IFC Advisory Services to UBL
Engro Power Gen	**660 MW sub-critical coal power plant**;	Owners: Engro Power Ltd.; China Machinery	**CPEC Priority Project** Engro Corp. is a long time,

	Thar Block II coal (SECMC) supply agreement	Engineering Corporation (CMEC);	active IFC client (20+ yrs); multiple finance to multiple Engro entities, including IFC $3 million equity in Engro Corp. and 20% ownership of Engro Energy Ltd.'s 217 MW gas power plant.
	Financial closure: April 2016; **In-service 2019**	Finance: China Construction Bank ($207 million); China Development Bank (CDB) ($207 mil.); Industrial & Commercial Bank of China ($207 m) Askari Bank ($19 mil.); Faysal Bank ($19 mil.); Habib Bank Ltd. ($19 m) Meezan Bank ($19 mil.); Bank Alfalah Ltd. ($19 mil.); Bank of Punjab ($19 m); United Bank Limited ($19 mil.); Soneri Bank ($19 mil); Sindh Bank (public) Sinosure $621 million guarantee	Habib Bank Ltd.- April 2015: **IFC $75 million equity and $150 million loan** Dec 2014: **IFC $66 million equity** in Bank Alfalah Ltd. (BAFL); 2012 & 2017 IFC advisory services to BAFL The following banks received IFC advisory services: Habib Bank Ltd. Meezan Bank Bank Alfalah Ltd. United Bank Limited
Thal NOVA	**330 MW sub-critical coal power plant;** coal from Thar Block II-SECMC (see above)	Owners: House of Habib (Thal); HUBCO; Novatex Ltd.; China Machinery & Engineering Corp. (CMEC); Descon Engineering Limited	**CPEC Priority Project** 1990s World Bank actively involved in creating HUBCO and set up fund to develop HUBCO
	Financial closure: Sep 2020; Coming on-line: June 2022	Finance: China Development Bank (CDB) and Habib Bank Ltd (HBL)	Habib Bank Ltd.- April 2015: IFC $75 million equity and $150 million loan
Thar Energy Ltd. II	**330 MW coal power plant**; coal from Thar Block II (SECMC)	Owners: HUBCO; Fauji Fertilizer Company; China Machinery Engineering Corp (CMEC)	**CPEC Priority Project** 1990s World Bank actively involved in creating HUBCO and set up fund to develop HUBCO
	Financial closure: Jan 2020; coming on-line: Dec 2021	Finance: China Development Bank (CDB) and Habib Bank Ltd (HBL)	Habib Bank Ltd.- April 2015: IFC $75 million equity and $150 million loan
Jamshoro I	**600 MW supercritical coal power plant**; coal blend: 20% Thar lignite coal; 80% imported sub-bituminous coal	Owners: GENCO Holding Company Limited; and Jamshoro Power Company Limited	
	Coming on-line: 2023	Finance: Dec 2013 **$1.3 billion loan Asian**	Part of WB technical assistance was to consider

		Development Bank (ADB)	finance from other IFIs
		$300 million loan Islamic Development Bank	
		$380 million equity Gov. of Pakistan	**World Bank** Energy Sector Reform DPFs budget support to Gov. of Pakistan: **$600 million May 2014** **$500 million Nov 2015**

Table Notes: WBG = World Bank Group; CPEC = China Pakistan Economic Corridor program, a showcase of China's Belt and Road Initiative; IFC = International Finance Corporation, the private sector arm of the World Bank Group; ICBC = Industrial and Commercial Bank of China; and SPV = special purpose vehicle

End Notes

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