April 2022

# THE TROUBLE WITH GAS IN PAKISTAN

## How World Bank Group's support for fossil gas has impeded the renewable energy transition

### Introduction

For decades Pakistan has struggled to supply electricity to its fast-growing population of 228 million citizens. About 50 million Pakistanis are not connected to the power grid, and those that are face frequent blackouts. Power outages are estimated to cost the equivalent of 7 percent of Pakistan's GDP annually, with blackouts lasting up to eight hours in cities and even longer in the countryside. Power cuts have also sparked violent riots, leading the government to proclaim that the energy crisis had become a national security issue.

The World Bank has been a central partner in energy sector planning and development in Pakistan since 1950, and continues to be extremely influential in providing technical assistance and development policy finance that heavily influence its legal, regulatory, and policy frameworks.

The World Bank's analysis claims that a large and sustained expansion of solar PV and wind power, alongside hydropower and substantial investments in the grid, would be both achievable and desirable in Pakistan. A focus on sustainable renewable energy would lead to immediate and long-term economic, supply security, and environmental benefits and ensure Pakistan's participation in the global energy transition.

However, adding more hydropower without considering those with existing legal and established claims on water use is likely to increase water conflict in Pakistan. There are also questions over hydropower dams' ability to reliably supply power for Pakistan. For example the large Tarbela dam was only operating at 25% of capacity due to water shortages during a 2021 heatwave, which contributed to the power cuts.

**The World Bank and the IFC must support the Government of Pakistan to look to its own indigenous, sustainable and renewable sources and stop investing in costly imports and fossil fuel infrastructure.**

## The Trouble with Gas in Pakistan

It is now widely accepted that gas cannot be considered a 'transition' fuel to cleaner energy systems, but rather another carbon intensive high emitting fossil fuel, similar to coal, potentially diverting funds to cleaner renewable alternatives. Therefore, plans to expand gas infrastructure in Asia pose one of the greatest threats to meeting the goals of the Paris Agreement and averting the most catastrophic impacts of the climate crisis. Fossil gas is harmful because:

- There is significant leakage of methane from the processing, transport, regasification and consumption of gas. Methane is 83 to 86 times stronger over 20 years than carbon dioxide (CO2) as a greenhouse gas.
- Fossil gas affects air quality and hazardous air pollutants have harmful effects on health and the environment.
- Fossil gas infrastructure, including pipelines, leaks harmful chemicals into the environment and water supplies.
- The siting of offshore Liquified Natural Gas (LNG) floating units damages mangroves and endangers the livelihoods of indigenous peoples in Pakistan.

With Pakistan's domestic production of fossil gas in decline, the door is open to a rapid transition to sustainable renewables. Instead demand for fossil gas continues to rise. This demand is artificially inflated due to the heavily subsidised residential and fertiliser sectors. In 2016 Pakistan turned to Liquefied Natural Gas (LNG) to close the supply gap. LNG power plants now constitute 25% of total gas provision.

## Offshore LNG infrastructure Impacts:

In 2015 the IFC made a $20m equity investment in Pakistan's first LNG import terminal at Port Qasim near Karachi. This prepared the ground for both present and future planned LNG terminals concentrated at Port Qasim, will have the following harmful effects:

They will foreclose traditional fishing systems for local communities, forcing them to go to the open sea for fishing and risk their lives in small boats;

A substantial portion of mangroves which have been in distress are due for removal to make room for pipelines and navigation purposes;

Destruction of mangroves will also compromise their natural ability to protect coastal communities against coastal hazards such as cyclones, water encroachment etc;

Coastal communities' livelihoods will be seriously impacted because mangroves constitute a natural and important resource for them;

The fish population will be reduced because mangroves are a necessary and effective breeding ground for fish.

Almost half of the imported LNG is bought on the spot market, which has forced Pakistan to pay the most ever for spot shipments to top up supply under long-term contracts, or even forgo the shipments altogether. Pakistan has a fragile economy which is struggling under the burden of imported LNG. In 2020, Pakistan's economic growth remained negative and approximately 35% of GDP still goes to servicing debt in the energy sector. This is caused by the government paying crippling capacity payments rising to $5.5billion to energy companies to ensure that there is sufficient generation capacity available to meet the demand at all times. These locked-in capacity payments coupled with the running of inefficient power plants, leads to what is called 'circular debt'.

The surge in global gas prices is due to shortages in Europe which has pushed Asian LNG prices to record levels. In the winter of 2021, fuel costs from gas in Pakistan were three times higher than for energy generated from solar and wind. In Pakistan there is also growing circular debt in the gas sector because of the gap between the price at which the fuel is imported and the subsidised rate that a large segment of consumers pays for it.

Distribution losses across the gas supply chain are also a significant problem with estimates of unaccounted for gas (UFG) doubling from 9 to 18% in recent instances.

Pakistan's Prime Minister Imran Khan carried out a long-planned visit to Moscow on 23-24 February, which coincided with day one of Russia's invasion of Ukraine. In the context of gas and energy security, this visit was partly about securing Russia's 26% investment in the Pakistan Stream Gas Pipeline between Karachi and the city of Kasur in Punjab – a project costing over $2bn that would ultimately increase Pakistan's dependence on imported LNG. The visit, at such a controversial time, and the ensuing gas crisis, demonstrate that LNG infrastructure investments are highly risky in the current context.

## A snapshot of World Bank and International Financial Corporation (IFC)'s role in fossil gas

This case study gives some examples of where the World Bank and IFC have supported gas and LNG energy in Pakistan which has resulted in Pakistan's dependence on expensive fossil gas in 2022. It does not cover lending to clients through financial intermediaries.

In 2002, the IFC invested $30 million in LASMO Oil Pakistan ltd, to develop Pakistan's Bhit gas field in Sindh province. The processed gas was sold to Sui Southern Gas Company, one of Pakistan's state-owned gas transmission and distribution companies. The specified aim was to promote gas as the fuel of choice for new industrial users in the Karachi region and reduce the country's dependence on imported oil.

Over a decade later, in 2016, the World Bank cancelled a $100m loan to Sui Southern Gas Company to enhance the supply of fossil gas by reducing physical and commercial losses of gas in the pipeline system, indicating that there were problems of methane leakage from gas pipelines. The World Bank stopped this loan citing the company's lack of interest in rectifying the problem.


In 2015, the IFC invested $15m equity and loaned $20m to Engro, a leading Pakistani conglomerate, to support the construction of Pakistan's first liquefied natural gas (LNG) terminal. Located at Port Qasim, near Karachi, the facility introduced Pakistan to LNG imports. This has become a financial noose around the neck of the country's energy sector as LNG prices soar. The project was part of World Bank Group and IFC strategy to mobilise up to $10 billion in investments to address Pakistan's power shortages. The terminal handles up to 4.5 million tons of LNG every year, and its construction aimed to reduce the country's reliance on diesel.

In addition to the Pakistan Stream Gas Pipeline, the government is planning two Floating Storage Regasification Units (FSRU) that will go into service from late 2022 to 2024 according to IEEFA. One Combined-Cycle Gas Turbine (CCGT) power project reached financial close in 2021. This plant will have a life cycle of thirty years, so there are consumer concerns that the power plant may turn into another stranded asset, resulting in increased electricity and gas prices. Local banks, including Habib Bank are financing this project through 75% commercial debt.

Habib Bank is no stranger to fossil fuel investments and has invested in coal infrastructure in the past, supported by the IFC. In April 2015, for example, the IFC invested $75 million in equity and provided a $150 million loan to Habib Bank. Habib then went on to invest equity in and/or provided debt finance to five Thar Coal-to-Power projects, including Thar Block I integrated coal mine and 1,320 MW subcritical power plant; Sindh Engro Coal Mining Company (Thar Block II); and three sub-critical coal power plants totalling another 1,320 MW (all supplied by Thar Block II).

Back in 2015, the World Bank and Government of Pakistan considered that importing LNG an economically viable source of power generation. Today imported LNG prices in Pakistan are reaching record highs, and as LNG suppliers ENI and Gunvor default on LNG deliveries, Pakistan is turning back to diesel. Further, state-owned gas supply companies (SSGPL and SNGPL) have categorically objected to the use of its transmission pipelines for private imported gas, citing lack of spare capacity. This could lead to imported LNG terminals becoming stranded assets in the future, compounding skyrocketing costs with further transmission-related expenses.

With investment and support Pakistan could turn its back on fossil fuels and invest in its own energy security through developing sustainable, renewable indigenous sources of energy.

> **Today imported LNG prices in Pakistan are reaching record highs**

## World Bank prioritising a transition to renewable energy in Pakistan

The World Bank is aware of Pakistan's dwindling domestic fossil gas reserves and the increasing dependency on fossil fuel imports. Its 2020 Variable Renewable Energy Integration and Planning Study demonstrates that expanding renewable energy generation could help reduce reliance on fossil fuel imports, reduce electricity price volatility, and meet the country's climate change mitigation targets.

The World Bank's Systematic Country Diagnostic 2020 forms the basis of the Country Partnership Framework 2022 to 2027, which guides all World Bank Group investments in Pakistan throughout that period. It states that the Government of Pakistan should rebalance the future energy-mix, to *'reduce Pakistan's dependence on expensive fossil fuels and increase the contribution of indigenous, clean and green resources, with an emphasis on encouraging private sector investments'*.

The World Bank's Pakistan Country Private Sector Diagnostic of May 2021 also notes that supporting the transition to renewable energy is more important than ever. It goes further by saying that new technology, declining unit costs of production, and private solutions in the renewable energy sector could revolutionise the energy industry in Pakistan in the coming decades. It demonstrates that the benefits would be improved reliability, less pollution, and a more affordable energy mix to benefit households and producers.

The World Bank's Development Policy Loans (DPL) are an increasingly influential financing instrument that provide non-earmarked loans to governments for policy and institutional reforms. It is subject to prior actions that are agreed with governments before disbursement. In 2021 Development Policy Loans to Pakistan amounted to $1.2bn and aimed to restore the financial viability of the power sector and lock in the transition to a low carbon footprint.

In 2020 and 2021 the World Bank have three energy sector policy loans to the Pakistani government:

- Program for Affordable and Clean Energy, (PACE)
- Resilient Institutions for Sustainable Economy (RISE)
- Securing Human Investment to Foster Transformation (SHIFT)

The World Bank expects the PACE, RISE, and SHIFT reforms collectively to help Pakistan get on a sustainable growth path. However, in spite of these commitments to support the renewable energy transition, the World Bank put pressure on the government and energy authorities to accelerate power sector reforms ahead of the approval of the PACE loan. In fast-tracking the approval process, energy authorities slashed the 2030 renewable goals in the energy generation mix to 2030 from 30% to 17% of the generation mix. The generation mix in this revised scenario is dominated by expensive and dirty fossil fuels, with additions of around 8.5 GW of coal, and 10 GW of LNG and gas to be made in the next 10 years.

This is particularly disappointing because both Pakistan's Alternative & Renewable Energy Policy (AREP) 2020 and the World Bank's own research laid out in the "Variable Renewable Energy (VRE) Integration and Planning Study recommended a VRE target of 30-33% of the energy mix by 2030, so this significant reduction in the VRE target has come as a blow to civil society energy experts in Pakistan.

## RECOMMENDATIONS TO THE WORLD BANK AND IFC

Recognise that the previous policy of supporting fossil gas and LNG infrastructure has been a costly mistake that has contributed to Pakistan's reliance on imported LNG today and the exorbitant spot prices of suppliers

Systematically consult with civil society in Pakistan in an open and transparent dialogue on the preparation of new World Bank Development Policy Finance and technical assistance and IFC equity investments and loans for the energy sector

Use its resources to support the government of Pakistan to transition rapidly away from fossil gas and imported LNG with an emphasis on ensuring long-term energy security based on sustainable renewables and storage as well as grid flexibility and upgrades

Continue to support the transition to sustainable renewables, including solar, wind, and biogas, and promote Pakistan's potential to leapfrog "from coal to clean"

STOP FUNDING GAS

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