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THE WAR IN UKRAINE

Impact on Pakistan's energy security

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ANALYSIS

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Abstract

Pakistan has long dealt with energy-insecurity, a state of affairs exacerbated by the disastrous economic effects of the pandemic, floods and war in Ukraine. While some experts warned Pakistan that its energy dependence was untenable, there were others who believed such concerns were overblown thanks to the abundance and low cost of Liquefied Natural Gas. The war in Ukraine has proven the latter group wrong, the subsequent sanctions disrupting energy supplies from Russia and driving up global prices. Europe's entry into the market and ability to meet any cost in securing limited worldwide supplies place Pakistan in an even more difficult position.

Pakistani officials already warn of mass gas shortages, and load-shedding in households is rampant with areas of the country experiencing daily power cuts that are 16 hours long. The country's vital textile industry also stands to suffer from an interrupted and limited supply. This situation exists despite Pakistan's possession of exploitable natural resources, owing to policy-makers' dogmatic view that the development of these resources for self-reliance was unachievable. In addition, insecurity and political instability in areas such as resource-rich Balochistan have thwarted any remedial measures.

Pakistan's alliances and loyalties with traditional allies are being tested at this difficult time. To encourage vital foreign investment in Pakistan's energy sector, the government can take advantage of the desire of the Chinese, Russians, Americans and Europeans to gain influence in the country. Restricted by geopolitical considerations from taking sides in the war on Ukraine, Pakistan must secure its national interests, especially energy security.

Pakistan should eschew inactivity despite the risk of being outbid in the competitive global LNG market. Responsible energy policymaking must be embraced, including the implementation and incentivisation of energy conservation measures, whilst shielding the lower classes from additional energy costs. Needed is a multifaceted ener-

gy policy that considers all available resources such as gas, oil, coal, solar, hydro and wind power. Experts must be involved in the formulation of sound strategies to exploit these sources, and Pakistan must learn from its mistakes, such its signing of bad-faith contracts with LNG middlemen, which allowed them to abandon Pakistan's agreements for profits.

However, political turmoil remains the largest contributor to Pakistan's energy insecurity. The government and opposition parties will need to put aside their partisan bickering to prioritize the country's interests. Sound policies grounded in reality, as opposed to theoretical ones, are called for, and leaders must step up during crises.

Pakistan is in dire need of an infrastructural upgrade and must play all its cards to achieve it. Diplomatically, Pakistan holds significant influence in international forums and has valuable voting power at the United Nations. Economically, Pakistan can promise significant benefits to nations that invest in its natural resources.

1 Context

Pakistan has long been an energy-insecure country, owing to its unfettered reliance on energy imports (Malik et al., 2019). The War in Ukraine, the COVID-19 pandemic and the 2022 floods have worsened uncertainty over its energy supplies. In 2019, the Asian Development Bank published a white paper stating, “An import-driven energy policy is not sustainable for Pakistan, making it energy insecure in the long term” (Malik et al., 2019). The war in Ukraine and the resulting supply disruption in international energy markets have made Pakistan more vulnerable¹.

The Government of Pakistan admits that although the country produces oil, increased extraction of such resources is impeded by technological, technical and financial hurdles. The implication is that Pakistan’s economy was teetering on the edge before the war (to an extent because of the pandemic and floods). The IMF bailout is another spanner in the works, its conditions limiting Pakistan’s options in overcoming its current energy shortfall².

With Europe competing over global LNG supplies because of the war in Ukraine, prices have surged nearly tenfold³. Prime Minister Shehbaz Sharif laments that Pakistan cannot compete with wealthier European nations, whose economies are several sizes larger, for LNG supplies⁴. Pakistan’s demand for LNG has fallen by 19%, a single fuel shipment now costing \$100 million⁵.

The depreciation in value of the Pakistani rupee (PKR) has resulted in foreign exchange reserves dropping to their lowest in three years,

1 Shah, S. N. A., Majeed, G., Ali, R. A. and Hussain, T., 2022. Russia-Ukraine Crisis and Its Impact on South Asia, *Review of Applied Management and Social Sciences*, 5(2), pp. 141-148.

2 Sullivan, A., 2022. Europe’s Liquefied Natural Gas demand surge hits Asia, DW, 10 November. Available at: <https://www.dw.com/en/lng-european-thirst-for-natural-gas-puts-bangladesh-and-pakistan-in-the-dark/a-63401354>, accessed on 18 November 2022.

3 Amjad, H., 2022. Blackouts in South Asia: Revisiting Power Policy Debates in Bangladesh, Pakistan, and Sri Lanka’, *Observer Research Foundation*, 9 November. Available at: <https://www.orfonline.org/expert-speak/blackouts-in-south-asia/>, accessed on 16 November 2022.

4 Ibid.

5 Stapczynski, S., Shiryayevskaya, A. and Mangi, F., 2022. Europe’s Energy Crunch Will Trigger Years of Shortages and Blackouts, *BNN Bloomberg*, 7 November. Available at: <https://www.bnnbloomberg.ca/europe-s-energy-crunch-will-trigger-years-of-shortages-and-blackouts-1.1843004>, accessed on 20 November 2022.

forcing Moody's Investors Service to label the nation's credit rating as "junk"⁶. With such a rating, LNG suppliers are uncertain whether Pakistan can pay for deliveries, leaving the country bereft of bids on tenders for long-term deals on LNG supplies⁷.

Though the common perception is that floods and war are the main culprits, the reality is that weak infrastructure has for years prevented Pakistan from tapping into domestic resources of fossil fuels, making it dependent on energy imports⁸. Old power plants are increasingly expensive to operate and many remain idle. Pegging its energy security on volatile global supplies has proven to be a failed high-risk and high-cost strategy for Pakistan⁹.

Pakistani engineering scholars (2021) state that besides lack of investment, it is political instability that has hindered large hydro and coal projects¹⁰. Political turmoil, partisanship and drastic leadership changes have kept a stable strategy for energy security from being appropriately implemented¹¹. Until politicians put aside their differences to concentrate on stemming the energy crisis, more rhetoric and face-saving measures are all that seem likely, costing the country even more in the long term. To put it succinctly, the energy crisis the nation now faces can be traced to an absence of leadership with foresight.

6 Ibid.

7 Ibid.

8 Cohen, A., 2022 Pakistan's Deluge Is Deepening Its Longstanding Energy Crisis, Forbes, 22 September. Available at: <https://www.forbes.com/sites/arielcohen/2022/09/22/pakistans-deluge-is-deepening-its-longstanding-energy-crisis/>, accessed on 17 November 2022.

9 Amjad, H., 2022. Blackouts in South Asia: Revisiting Power Policy Debates in Bangladesh, Pakistan, and Sri Lanka, Observer Research Foundation, 9 November. Available at: <https://www.orfonline.org/expert-speak/blackouts-in-south-asia/>, accessed on 16 November 2022.

10 Raza, M.A. et al., 2021 Energy demand and production forecasting in Pakistan, Energy Strategy Reviews, 39.

11 Ibrahim, M. and Ikram, I., 2022. Pakistan's Energy Crisis and Its Solution, Paradigm Shift, 23 August. Available at: <https://www.paradigmshift.com.pk/pakistan-energy-crisis-and-its-solution/>, accessed on 20 November 2022.

2 Impact

What does an energy crisis in Pakistan look like? In the words of a Pakistani petroleum ministry official, “there would be no gas supply (to household consumers) for 16 hours a day”¹². According to Muhammad Mahmood, Additional Secretary in charge of the government’s Petroleum Division, Pakistan is unable to exploit its gas resources due to insecurity and political instability (ibid). Industry, especially the textile sector, which makes up 60% of the country’s exports, has been severely impacted¹³. Qasim Malik, the vice president of the Chamber of Commerce in Sialkot, describes the situation as one “of emergency”¹⁴.

The worst-case scenario for Pakistan would involve power shortages becoming a longer-term reality, which the government seeks to combat by reducing fuel consumption nationwide¹⁵. The government had previously not prioritized energy conservation practices.

According to Pakistan’s Central Power Purchasing Authority (CPPA), the country’s public debt stood at \$10 billion in March 2022. If urgent power sector reforms are not enacted, this debt will reach \$17 billion by 2025¹⁶. Successive governments have been kicking the can down the road with respect to the removal of subsidies, though the IMF bailout may provide the motivation necessary to make the move. However, while the elite can bear the brunt of higher energy costs, the government has no reserves it can dip into to shield the lower classes from the same.

12 Kiani, K., 2022. Govt has no option but to ration gas in winter, Dawn, 11 November. Available at: <https://www.dawn.com/news/1720286/govt-has-no-option-but-to-ration-gas-in-winter>, accessed on 20 November 2022.

13 Ibrahim, M. and Ikram, I., 2022. Pakistan’s Energy Crisis and Its Solution, Paradigm Shift, 23 August. Available at: <https://www.paradigmshift.com.pk/pakistan-energy-crisis-and-its-solution/>, accessed on 20 November 2022.

14 Ibid.

15 Sullivan, A., 2022. Europe’s Liquefied Natural Gas demand surge hits Asia, DW, 10 November. Available at: <https://www.dw.com/en/ing-european-thirst-for-natural-gas-puts-bangladesh-and-pakistan-in-the-dark/a-63401354>, accessed on 18 November 2022.

16 Government of Pakistan’s Finance Division., 2022. Pakistan Economic Survey 2021-22. Islamabad: Finance Division. Available at: https://www.finance.gov.pk/survey/chapter_22/PES14-ENERGY.pdf, accessed on 20 November 2022.

3 Alternative Supplier(s)

Europe's cornering of global LNG supplies shuts Pakistan out of the spot market, possibly pushing the energy-insecure country closer to Russia. President Vladimir Putin promised to fuel Pakistan, which may help keep the lights on and give Russia cause to claim it is less isolated than some believe¹⁷.

This sentiment was evident when Pakistan's ambassador to Russia, speaking to Russian state-run media, rhetorically asked, while confirming discussions over LNG supplies from Russia, "If the rich countries [read: Europe] take away all the LNG, what is going to happen to us?"¹⁸. The chances are that Europe may have lost soft power in Pakistan.

However, there are few easy options for Pakistan's access to Russian energy. The proposal of constructing a gas pipeline from Russia, known as Pakistan Stream, is impeded by sanctions Pakistan does not have the ability to circumvent¹⁹. Some Pakistani scholars naively claim that by remaining neutral, Pakistan can simultaneously sign energy deals with Russia and keep from antagonising the West by not voting either way at the UN²⁰. As a small player in this larger geopolitical battle, the truth is that Pakistan will inevitably be forced to pick a side.

China is even more entrenched. The silent soft-power battle waged by Beijing and Washington in Pakistan will, no doubt, impact the outreach of either rival during the country's energy crisis. While China can provide investments in clean coal power use, the United States

17 Stapczynski, S., Shiryayevskaya, A. and Mangi, F., 2022. Europe's Energy Crunch Will Trigger Years of Shortages and Blackouts, BNN Bloomberg, 7 November. Available at: <https://www.bnnbloomberg.ca/europe-s-energy-crunch-will-trigger-years-of-shortages-and-blackouts-1.1843004>, accessed on 20 November 2022.

18 TASS, 2022. Pakistan counts on LNG supplies from Russia – ambassador to Moscow, 17 October. Available at: <https://tass.com/economy/1523655>, accessed on 19 November 2022.

19 Sullivan, A., 2022. Europe's Liquefied Natural Gas demand surge hits Asia, DW, 10 November. Available at: <https://www.dw.com/en/lng-european-thirst-for-natural-gas-puts-bangladesh-and-pakistan-in-the-dark/a-63401354>, accessed on 18 November 2022.

20 Shah, S. N. A., Majeed, G., Ali, R. A. and Hussain, T., 2022. Russia-Ukraine Crisis and Its Impact on South Asia, Review of Applied Management and Social Sciences, 5(2), pp. 141-148.

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can invest in Pakistan's renewable and mineral energy sources²¹. Pakistan is compelled to juggle relations with both sides whilst trying to secure as much advantage for itself.

It is inconceivable that Pakistan, which has relied on foreign energy suppliers for many years, is suddenly unable to re-calibrate its political and economic alliances. An energy-insecure country with political instability and economic weakness cannot afford to rock the boat²². This makes it a time for calculated, measured decisions.

21 Cohen, A., 2022, Pakistan's Deluge Is Deepening Its Longstanding Energy Crisis, Forbes, 22 September. Available at: <https://www.forbes.com/sites/arielcohen/2022/09/22/pakistans-deluge-is-deepening-its-longstanding-energy-crisis/>, accessed on 17 November 2022.

22 Shah, S. N. A., Majeed, G., Ali, R. A. and Hussain, T., 2022. Russia-Ukraine Crisis and Its Impact on South Asia, *Review of Applied Management and Social Sciences*, 5(2), pp. 141-148.

4 Liquefied Natural Gas (LNG)

Pakistan has relied on the spot market for almost half its LNG supplies instead of securing long-term contracts with suppliers. Pakistan's long-term contracts have been with companies that do not necessarily produce LNG themselves. These contracts include break clauses, which allow suppliers to divert their stock to other markets with little warning. The profits suppliers make with current LNG prices far outweigh the penalties they have to pay when breaching these agreements²³, leaving Pakistan literally out in the cold. Pakistan's economy has undoubtedly weakened its hand in such negotiations, leaving it with no recourse.

Before the war in Ukraine, Pakistani experts incorrectly believed natural gas would always remain cheap and in abundance²⁴. With such thinking, Pakistan never enacted an energy conservation drive, and its most recent building energy code harkens back to 1990, with few updates in the following years. The country has greater vulnerability to energy market shocks because of technological inefficiencies and an inability to close the supply-demand gap²⁵.

Pakistan's reluctance to adopt coal stems from obligations under the Paris Agreement and regulatory approvals and financing for coal production projects²⁶. Pakistan had aimed to transition towards LNG as a cleaner energy source, leading China to abandon the construction of new coal power stations. However, impending winter gas rationing has forced Pakistan to consider coal once again. Modern Chinese technology, however, will allow it to utilise cleaner forms of coal²⁷.

23 Sullivan, A., 2022. Europe's Liquefied Natural Gas demand surge hits Asia, DW, 10 November. Available at: <https://www.dw.com/en/lng-european-thirst-for-natural-gas-puts-bangladesh-and-pakistan-in-the-dark/a-63401354>, accessed on 18 November 2022.

24 Amjad, H., 2022. Blackouts in South Asia: Revisiting Power Policy Debates in Bangladesh, Pakistan, and Sri Lanka, Observer Research Foundation, 9 November. Available at: <https://www.orfonline.org/expert-speak/blackouts-in-south-asia/>, accessed on 16 November 2022.

25 Ibid.

26 Perera, D. and Barthe-Dejean, J., 2022. The Russia-Ukraine Conflict: Impact on Energy Security in Asia. Singapore: Holman Fenwick Willan LLP. Available at: <https://www.hfw.com/The-Russia-Ukraine-Conflict-impact-on-energy-security-in-Asia-Sept-2022>, accessed on 16 November 2022.

27 Ibid.

5 Other Energy Sources

Farrukh Mahmood Mian, a former Energy Group Director at the Islamic Development Bank, argues that Pakistan needs to view energy security as synonymous with national security. To secure a long-term energy supply, Mian suggests a two-pronged approach: exploiting domestic resources and using alternative energy such as wind and solar power²⁸. It is time for Pakistan to look inwards and find solutions to its energy crisis.

Pakistan has two choices: import cheaper fuels like coal or oil or develop its domestic resources. With LNG becoming unaffordable, the latter choice should be the focus as it decreases dependence on global market volatility and geopolitical uncertainty. Critics have questioned for years the Pakistani government's reticence to tap into the country's vast gas reserves, especially in Balochistan. Insecurity and political instability due to years of negligence have made Balochistan²⁹ a tough region for governmental operation.

According to Mian, hydropower can be responsibly exploited while keeping environmental impact to a minimum. However, the high cost and long timelines involved in hydropower plant construction, electricity transmission network upgrades and the resettlement of affected populations require Pakistani experts to perform comprehensive cost-benefit analyses³⁰. The government admits that Pakistan currently avails only 16% of its total hydropower potential³¹. Mian's optimism regarding hydropower may be misplaced, however, as droughts and floods make it an unreliable energy source³².

28 Mian, F.M., 2022. Intertwined: energy and national security, Dawn, 17 October. Available at: <https://www.dawn.com/news/1715419>, accessed on 18 November 2022.

29 Stapczynski, S., Shiryayevskaya, A. and Mangi, F., 2022. Europe's Energy Crunch Will Trigger Years of Shortages and Blackouts, BNN Bloomberg, 7 November. Available at: <https://www.bnnbloomberg.ca/europe-s-energy-crunch-will-trigger-years-of-shortages-and-blackouts-1.1843004>, accessed on 20 November 2022.

30 Government of Pakistan's Finance Division, 2022. Pakistan Economic Survey 2021-22. Islamabad: Finance Division. Available at: https://www.finance.gov.pk/survey/chapter_22/PES14-ENERGY.pdf, accessed on 20 November 2022.

31 Ibid.

32 Amjad, H., 2022. Blackouts in South Asia: Revisiting Power Policy Debates in Bangladesh, Pakistan, and Sri Lanka, Observer Research Foundation, 9 November. Available at: <https://www.orfonline.org/expert-speak/blackouts-in-south-asia/>, accessed on 16 November 2022.

Experts across the board agree upon the need to exploit the country's coal resources, and Pakistan will likely accelerate the development of the Thar coalfield in Sindh province. Though forced by the energy crisis to default on its commitments under international climate agreements, Pakistan can rely on new, clean coal technology to alleviate coal's detrimental environmental impacts. Thar, with the largest coal reserves in the country, offers promise of reducing Pakistan's dependence on imported coal, as more projects utilising its resources are added to the electricity grid³³.

Pakistan also needs to immediately formulate strategies around the use of alternate energy sources as climate change takes hold³⁴ Pakistan's Alternative and Renewable Energy Policy 2019 outlines a sharp increase in the share of renewable resources such as wind and solar power³⁵.

Though maintenance of a constant supply of wind and solar power can be a challenge, new technology in both fields and proper energy storage can provide a viable alternative to coal and hydropower. However, this requires the up-skilling of Pakistani engineers³⁶.

Pakistani engineers used Balochistan as a case study and found that its untapped resources, such as natural gas, coal, and solar energy, can provide a significant portion of the country's required energy supplies³⁷. Scholars believe that the preliminary development of energy sources in Balochistan could help the country weather any energy crises till at least 2030³⁸.

33 Government of Pakistan's Finance Division, 2022. Pakistan Economic Survey 2021-22. Islamabad: Finance Division. Available at: https://www.finance.gov.pk/survey/chapter_22/PES14-ENERGY.pdf, accessed on 20 November 2022.

34 Amjad, H., 2022. Blackouts in South Asia: Revisiting Power Policy Debates in Bangladesh, Pakistan, and Sri Lanka, Observer Research Foundation, 9 November. Available at: <https://www.orfonline.org/expert-speak/blackouts-in-south-asia/>, accessed on 16 November 2022.

35 Government of Pakistan's Finance Division, 2022. Pakistan Economic Survey 2021-22. Islamabad: Finance Division. Available at: https://www.finance.gov.pk/survey/chapter_22/PES14-ENERGY.pdf, accessed on 20 November 2022.

36 Mian, F.M., 2022. Intertwined: energy and national security, Dawn, 17 October. Available at: <https://www.dawn.com/news/1715419>, accessed on 18 November 2022.

37 Raza, M.A. et al., 2021. Energy demand and production forecasting in Pakistan, Energy Strategy Reviews, 39.

38 Ibid.

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Though this report was published before the country's flooding and war in Ukraine, its recommendation regarding Balochistan remains unchanged: stop neglecting the region and bring it stability and security for the benefit of people in the region and the country.

Power generated by nuclear plants now experiences an increase in Pakistan³⁹. Prime Minister Shehbaz Sharif's National Solar Energy Initiative and the planned establishment of another nuclear reactor are decisive steps in making the country more energy independent⁴⁰.

39 Government of Pakistan's Finance Division, 2022. Pakistan Economic Survey 2021-22. Islamabad: Finance Division. Available at: https://www.finance.gov.pk/survey/chapter_22/PES14-ENERGY.pdf, accessed on 20 November 2022.

40 Cohen, A., 2022, Pakistan's Deluge Is Deepening Its Longstanding Energy Crisis, Forbes, 22 September. Available at: <https://www.forbes.com/sites/arielcohen/2022/09/22/pakistans-deluge-is-deepening-its-longstanding-energy-crisis/>, accessed on 17 November 2022.

6 Policy Recommendations

Pakistan's government has implemented several initiatives to deal with the energy crises, such as The National Power Policy 2013, Power Generation Policy 2015 and the Alternative and Renewable Energy Policy 2019. These policies aim to develop domestic energy production in an environmentally responsible manner. However, they require immediate amendments to account for contemporary realities and technological advances. Such legislation can help the country achieve energy security and a self-reliant economy⁴¹.

At this critical juncture, comprehensive, timely, sustainable and measured policies are imperative. However, these steps are necessary for a realistic chance at success:

1. Politicians must end runaway partisanship and work together across divides to usher in an era of political stability. Bickering costs time better devoted to developing energy security.
2. Pakistan must sign energy investment and infrastructure development deals with China, Russia and other willing nations while safeguarding its national interests. It must bear in mind lessons learned from its negative experiences with LNG intermediaries.
3. The country must initiate a nationwide energy conservation drive and public relations program to present energy as a finite resource. It must enact immediate measures to curtail energy wastage by households and industries and prioritise efficiency.
4. The promotion of clean energy technology⁴² through the expansion of incentive programs for the adoption of solar power by house-

41 Ibrahim, M. and Ikram, I., 2022. Pakistan's Energy Crisis and Its Solution, Paradigm Shift, 23 August. Available at: <https://www.paradigmshift.com.pk/pakistan-energy-crisis-and-its-solution/>, accessed on 20 November 2022.

42 Raza, M.A. et al., 2021. Energy demand and production forecasting in Pakistan, Energy Strategy Reviews, 39.

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holds and industries and the development of wind power tunnels are crucial.

5. Pakistan should push for reliance on its domestic energy resources through development and investment programs to reduce dependence on imports and increase energy security.

6. Regular official round table meetings with non-partisan economic, energy and environmental experts must be held, weighing every proposal's value to energy security and national interests.

7 Conclusion

Pakistan's energy issues predate the war in Ukraine, and their solutions require the right mindset, strategy and political will. Pakistan's prudent energy legislation must be implemented with amendments that account for the current situation across the country. Any policy implementation must be multifaceted enough to include the entire range of domestic energy resources available in the country.

For improvement in its energy security, Pakistan must stop relying on imported energy and readjust its mindset. The lesson from the current energy crisis is that no resource, including LNG, will remain cheap and abundant forever. Pakistan should strive to ensure it does not find itself in such a corner again for its economic progress and future.

About the Author

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Waqar Rizvi is a multilingual Canadian-Pakistani broadcast journalist, assignment editor, political and media consultant. He's pursuing a Master's in Media Ethics at the University of Sussex. Waqar works as a socio-political TV show host for British Muslim TV and an assignment editor for Citable, a new AI-based news start-up out of Texas. He provides media and political consultancy to European think tanks, including ITSS Verona.

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