



CEASE AND DESIST: WOULD A CARBON TAX PAVE THE WAY TO A SUSTAINABLE FUTURE FOR PAKISTAN?

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It is difficult to talk about the energy and power sectors in Pakistan without broaching the subject of the vicious cycle of circular debt. As of June 2023, the circular debt stock of Pakistan's power sector increased to PKR 2.31 trillion¹, upwards from PKR 2.25 trillion at the end of the previous fiscal year.

In an ideal world, the country could proceed with its transition to renewables, finally realising the solar and wind potential to its fullest extent. Unfortunately, the problem of circular debt proves a bit distracting, hanging over our heads like the sword of Damocles. However, the problem wasn't born out of nowhere. The circular debt crisis in the power sector was a result of the usual sluggish reforms arising from repeated administrative faux pas, operational losses from haphazard management, and political hesitations. But it's not too late to turn things around, if the government takes action now.

The heart of the matter lies in the power sector itself, which needs urgent and necessary reform, and we're halfway there. The International Monetary Fund (IMF) has provided us with a clear path forward, leading to the Fiscal Year 2024 Circular Debt Management Plan (CDMP)² this year. The main objective of the CDMP is to decrease the planned FY24 power subsidy, which amounts to PKR 976 billion, approximately 0.9% of the GDP. Additionally, the plan includes actions to counterbalance the anticipated FY24 CD flow of PKR 392 billion and hold the FY24 circular debt stock at bay (at the predicted end-FY23 level of PKR 2,374 billion, which is 2.2% of GDP). The successful execution of this all-encompassing plan is crucial to address challenges in the energy sector and lay the groundwork for a sustainable and resilient power industry in Pakistan. But is it enough?

The power sector needs more than a plan, rather a forceful push, to immediately shift to renewables. What better way to instill the values of a sustainable future into the hearts of these coal-powered giants than a carbon tax. During a 2018 national consultation organised by the Collaborative Instruments for Ambitious Climate Action (CI-ACA) in Islamabad, an outpour of representatives from the private and public sectors concurred that introducing a carbon tax in the country could attract investments in sustainability and clean energy, ultimately leading to a reduction in Pakistan's carbon emissions. A carbon tax gets the incentives right. If there is a carbon tax, every time somebody purchases fossil fuels, they now have to pay extra for the environmental damages. And make no mistake, the damages are grave and severe.

Many would argue that a carbon tax is beyond the scope of adaptation, and falls under mitigation, a problem of the Global North. To them I would say, mitigation is a global concern because emissions hurt everyone. One only needs to step into Lahore's atmosphere, cloaked with an ever-present, thick and toxic haze to concur. Emissions from the power and industrial sectors collectively contribute to 37% of the smog problem³, a figure far too high to be swept under the rug. Our power sector needs to be restrained and energies quite literally need to be redirected, for the sake of public health if not anything else.

Woollacott et al. (2018) show that a USD25/tCO₂ carbon tax introduced in the U.S. in 2020 and increased 5% annually until 2040 would produce USD 71-162 billion health benefits by reducing PM 2.5 and avoiding 8,559 to 19,329 deaths. If the carbon tax is doubled (USD50/tCO₂), the corresponding health benefits will increase by 35%⁴. Parry et al. (2015) show that countries that receive the highest health benefits from a carbon tax are Saudi Arabia, Iran, Russia, China, and Poland. If a carbon tax can work for the developing countries in this list, it can work for Pakistan.

While it may sound sinister, it doesn't have to be. The architecture of a carbon tax is designed in a way that it benefits the country even without accounting for co-benefits. For example, China's carbon tax is designed in a way that is favourable to its export-oriented economy, significantly reducing its economic losses from it. In Pakistan, taxes on fossil fuels in proportion to CO₂ for the same amount of energy output could be considered. This carbon tax would not just be a push for the power sector but also for the government to establish Pakistan's carbon market, complete with emissions trading schemes and carbon crediting.

The energy and power sector's extreme makeover is going to push it right into the arms of the vast and unexplored renewable energy potential in Pakistan. Pakistan has tremendous untapped potential to generate solar and wind power. According to the World Bank⁵, utilising just 0.071% of the country's total area for solar photovoltaic (solar PV) power generation would meet Pakistan's current electricity demand. Pakistan also has several well-known wind corridors with average wind

speeds of 7.87 m/s in 10% of its windiest areas. But the promise to shift to renewables is void of enthusiasm and Pakistan is still lagging behind.

Despite a number of successful projects, including the Quaid-e-Azam Solar Park, the installed capacity of solar and wind energy in Pakistan, at just over 1,500 Megawatts, is just 4% of total capacity, equal to around 2% of total generation. Pakistan's 2030 commitment was to level up to 24,000 Megawatts, a pipe dream without the right measures in place.

One of the glaring obstacles to solar adoption in Pakistan is the high upfront cost of solar panels and equipment. The majority of the population cannot afford to pay for the entire system in one go, and there are extremely limited financing options available. One solution that has worked for other countries like Kenya, is the pay-as-you-go (PAYGO) model. This model allows individuals to acquire a solar system with a small and manageable deposit after which they can pay incremental amounts on a daily basis. This system of payment in installments is something the government can facilitate to encourage an affordable transition to solar energy.

This kind of policy is one of the many that the government, with the allyship of the private sector, can implement, if it wishes to stay committed to a renewable energy transition. The time to act is now, free of political pressure and agenda, to secure a future for Pakistan and the planet.

¹"Pakistan's circular debt swells to Rs2.31tr in FY23". Business Recorder, September 2023.

²"The Economics of Circular Debt," SDPI, August 2023.

³UN FAO R-Smog Report, 2021.

⁴"Carbon Tax Design Architects for Developing Countries", Timilsina, G., August 2022.

⁵"Expanding Renewable Energy in Pakistan's Electricity Mix, The World Bank, November 2020.

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