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CIRCULAR DEBT ISSUE IN ENERGY SECTOR

INTRODUCTION:

Circular debt is a term that has become synonymous with Pakistan's energy sector, refers to the cascading cycle of non-payments throughout energy supply chain. It is a persistent problem in Pakistan that has caused significant economic and energy sector challenges. Unfortunately, the issue has not been controlled yet despite the efforts by successive governments. The circular debt stock reached a historical high of Rs. 2.5 trillion (3% of GDP) as of 2023. Though the circular debt emerged in 2006 in the energy sector, its seeds were sown in 1990s with the implementation of contracts with Independent Power Producers (IPPs). It allowed furnace oil based expensive power generation plants and burdened the government with increasing capacity payments. Expensive energy fuel mix, loss incurring Power Distribution companies (DISCOs), flawed and delayed power tariffs determination and unbudgeted subsidies are some of the other factors contributing to growing circular debt in energy sector. Hence needs immediate attention of policy makers to renegotiate contracts with Independent

Power Producers (IPPs), improving financial performance of Power Distribution companies (DISCOs); public awareness regarding non-payments and theft of electricity can be some of the solutions to break this vicious cycle.

CAUSES OF CIRCULAR DEBT ISSUE IN ENERGY SECTOR

The circular debt issue in energy sector is mainly caused due to flawed contracts with Independent Power Producers (IPPs), operational inefficiencies of Power Distribution Companies, Pitfalls and delay in tariff determination, transmission and distribution loss, poor revenue collection by distribution companies and unbudgeted subsidies. The accumulation of circular debt in energy sector is not only affecting the available capacity but also the creditworthiness of country in the eyes of investors. The 5 key contributors to circular debt cycle are as under-

1. Flawed Contracts with Independent Power Producers (IPPs)

In 1994, major contracts were signed with Independent Power Producers (IPPs), and to give capacity payments to the companies instead of utilization payments. Furthermore, by the installment of IPPs we opted for expensive energy source like fuel, coal, gas etc. The ~~checks~~

contracts did not mention checks on expensive fuel utilization by these production companies. It lead to an increase in the generation cost because of capacity payments along with rent payment under "Take or Pay" model. Moreover, the payments in Dollar based rate of return have further burdened the national exchequer as the consistent devaluation of rupee. As a result, payments to IPPs are ballooning adding to the circular debt.

2. Operational Inefficiencies of Power Distribution Companies (DISCOs)

Pakistan's energy mix is highly expensive due to over 40% of power generation relies on imported fuels. Over the years our reliance of Liquefied natural gas (LNG) and imported coal has increased. As the imported fuels are subject to their international market prices, a rise in international prices adds to the cost of power generation, which the consumer end tariffs are unable to recover fully, adding deficit in energy sector. Expensive electricity also lowers its demand and consequently poor bill revenue generation by distribution companies (DISCOs) triggering a shortfall in cash flow within energy sector. The rates notified by the government for end consumers are often lower than the tariffs

recommended by NEPRA (National Electric Power Regulatory Authority) due to political reasons. This creates a disparity between electricity cost and revenues, thus increasing the circular debt.

4. High Transmission and Distribution Losses by the Distribution Companies (DISCOs)

All the distribution companies (DISCOs) have been incurring huge transmission and distribution losses and facing low recovery of the billed amount (due to leakages, electricity theft and non-compliance, which add to the circular debt accumulation. Minimum 20% electricity is lost in transmission and distribution creating disparity between distributed electricity and bill recovery adding to the circular debt.

5. Unbudgeted Subsidies-

Government provides tariff differential subsidies to the Power Distribution Companies (DISCOs) for distributing electricity to the end consumers and to protect consumers from high electricity cost. But most often governments cannot fully fund these subsidies lead to a revenue-cost mismatch, a significant contributor to the circular debt. While subsidies are intended to make electricity more affordable for consumers, this management

has contributed to the circular debt issue.

SUSTAINABLE SOLUTIONS TO BREAK CIRCULAR DEBT CYCLE

To break the vicious cycle of circular debt in energy sector, policy makers need to take reasonable steps like renegotiating contracts with Independent Power Producers (IPPs), improving financial performance of Distribution companies, public awareness regarding theft and non-payments, reducing cost of electricity generation and shifting to cheaper and sustainable energy productions.

1. Renegotiation of Agreements with Independent Power Producers (IPPs)

The IPPs installed in 1986, 1994 and 2002 have never been renegotiated even once until 2020 due to criminal negligence and kickbacks. Some of the agreements with power producers were renegotiated in 2020, including utilization payment of electricity instead of capacity payment and rent payments, also the local power producers to be payed in rupee instead of dollars. However, higher ~~no~~ number of Independent Power Producers were installed in 2011 and 2015 with a 14 year time period mentioned in the agreements, which will be able to renegotiate in 2025 - 2028.

2. Improving Financial Performance of Distribution Companies (DISCOs)

High Transmission and distribution losses of distribution companies and inability to recover bills is a major contributor of circular debt. To improve the financial performance of distribution companies, government needs to make them independent and decentralized. The decentralization will help them to recover bills by being insulated of ministerial influence, which can be ensured by municipality model. It is antidote to the political interference as it would assign responsibility of bill recovery to the very political leaders, who have otherwise interfered with the DISCOs administration decisions. However, a strong local government is a pre-requisite for the implementation of this model.

Additionally, by breaking up distribution areas into small units can reduce the transmission loss. Large service areas translate to more transmission loss and poor bill recovery because of larger distances between control centres and field offices and operations, weakening the control and oversight capacity of distribution companies. Smaller units will have more control and oversight capacity resulting into higher bill recovery.

3. Public Awareness Regarding Electricity Theft and Non-Payments.

Public awareness campaign rehighlighting the repercussions of power theft and importance of timely bill payments can play a pivotal role in mitigating the issue. Addressing circular debt requires a collective effort that includes raising public awareness. Informative campaigns foster a sense of responsibility among consumers. By shifting the public perception on electricity from an entitlement towards a private good will help in recovery of bills. Also when citizens understand how their actions impact broader energy ecosystem, they are more likely to adopt responsibility in energy consumption practices.

4. Reducing Cost of Electricity Generation:

Electricity generation cost reduction is another solution to curb the issue of circular debt. This can be done by adopting cheaper electricity sources and shift reducing reliance on imported fuel. Government needs to work on ~~indige~~ indigenous energy sources like Thar Coal having the power generation of over 100GW and renewable energy with over 3000GW potential of power generation.

Government should also shift to cheaper electricity sources like hydroelectric power projects, wind power generation and solar

power generation- Under the ~~CEP~~ CPEC, major projects are underway to reduce the reliance on ~~an~~ expensive power generation. Some of them are completed like Karot Hydro Power Project with capacity of 730 MW energy generation and Sukki Kinari Hydro Power Project with 883 MW capacity. The wind projects installed under CPEC has capacity of 4500 MW power generation and solar projects with 3000 MW capacity. Government should put more effort and attention towards these projects as they will be significant in reducing the circular debt in energy sector.

CONCLUSION:

Circular debt is a major challenge for Pakistan's economy and energy sector. Addressing this problem requires a comprehensive and integrated approach including short-term and long-term models of financial turnaround of ~~the~~ DISCOs, reforms in IPPs contracts and shifting to cheaper ~~at~~ energy production. The implementation of these policies will help to break the vicious cycle of circular debt and ensure sustainable growth of energy sector and economy of Pakistan.