



## **PRIME Analytical Reports**

*Unlocking Business Potential for Growth*

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# **Circular Debt: State Incentives or Market Rules**



PRIME Analytical Reports are independent evidence based studies on the investment climate, economic policies and demographic changes in Pakistan, prepared to improve understanding of business and policy challenges faced by the country's private sector to help steer it on path of growth. To find out more please visit:

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## List of Acronyms

ADB	Asian Development Bank
BOD	Board of Director
CPPA	Central Power Purchasing Agency
DISCO	Power Distribution Company
DM	Distribution Margin
EPC	Erection, Procurement and Construction
FBR	Federal Bureau of Revenue
GDP	Gross Domestic Product
GENCO	Power Generation Company
GoP	Government of Pakistan
GST	General Sales Tax
GWh	Giga-Watt per hour
IPP	Independent Power Producer
KPK	Khyber Pakhtunkhwa
kWh	Kilo-Watt per hour
MoWP	Ministry of Water & Power
NEPRA	National Electric Power Regulatory Authority
NTDC	National Transmission and Dispatch Company

PARCO	Pakistan Arab Refinery Company
PHC	Power Holding Company
PSO	Pakistan State Oil
SOEs	State-owned Enterprises
T & D	Transmission and Distribution
TDS	Tariff Differential Subsidy
USAID	United States Agency of International Development
WAPDA	Water and Power Development Authority

## CIRCULAR DEBT: STATE INCENTIVES OR MARKET RULES

Key messages from this report are as follows:

FOR BUSINESSES	FOR POLICY
<ul style="list-style-type: none"><li>• Firms in Pakistan face the highest number of power outages in the world.</li><li>• Private and foreign investment has decreased due to energy crisis underpinned by persistent circular debt.</li><li>• Textile exports reduced by \$5 billion because of power crisis in 2012.</li><li>• Power sector investment is lower than its level in mid-1990s.</li><li>• Half a million jobs are lost in the industrial sector due to power crisis in 2015.</li></ul>	<ul style="list-style-type: none"><li>• Replace Central Power Purchasing Authority with a whole sale power market.</li><li>• Impact of circular debt falls the most on fiscal deficit &amp; development expenditure of government.</li><li>• DISCOs need to be privatized to make them more efficient and well-governed.</li><li>• Weak governance is instrumental factor in circular debt crisis.</li><li>• Government shouldn't give fuel subsidy for electricity generation.</li></ul>

## Introduction

Circular debt is the shortfall in collections by an entity which causes it to withhold payments to its suppliers spreading the cash crunch to the whole supply chain. More specifically, with regards to Pakistan's power sector, circular debt refers to unpaid bills by DISCOs<sup>1</sup> to key players especially: oil companies, gas companies, IPPs<sup>2</sup>, and WAPDA.<sup>3</sup> These payables in the power sector of Pakistan are Rs. 313 billion as of end-June 2015.<sup>4</sup>

However, circular debt is not limited to this shortfall in payables alone. As explained by the Finance Minister Ishaq Dar, in addition to these payables, circular debt also includes residual from payables clearance of June and July 2013, a disputed amount with the IPPs, distribution companies' non-recovery and penalties levied on past non-payment and transmission and distribution losses that are not recognized by the regulator<sup>5</sup>. Once these additions are accounted for, stock of circular debt increases to Rs. 648 billion<sup>6</sup> as of end-June 2015 which is approximately 6 percent of GDP<sup>7</sup>.

It is interesting to note that despite government's payment of the entire payable in the power sector of Rs. 480 Billion in 2013<sup>8</sup>, the specter of circular debt still looms over the economy as mentioned above.

This persistence of circular debt has disrupted the economic as well social life in Pakistan at large. As a result, a detailed analysis into the causes of circular debt, its potential overtones on the economy and its perspective solutions is imperative.

This report presents an analysis of the above mentioned challenges. It is structured as follows: section 1 presents a brief history of circular debt, evaluates the causes of circular debt, and its impact on the economy; and section 2 takes stock of government's attempt to reduce circular debt. Finally, the report argues in section 2 how privatization is a viable solution to this crisis.

*Circular debt is **6** percent of GDP as of end-June 2015.*

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<sup>1</sup> DISCOs refer to companies that distribute electricity to customers.

<sup>2</sup> Independent Power Producers are private power producing companies

<sup>3</sup> Naveed Iftikhar, Genie of circular debt: Can we pay prices of our costs? PRIME Institute, Islamabad.

<sup>4</sup> <http://www.dawn.com/news/1212748>

<sup>5</sup> Ibid

<sup>6</sup> Ibid

<http://www.dailytimes.com.pk/business/18-Jan-2016/imf-agreement-outcome-termed-disappointing>

<sup>7</sup> GDP of Pakistan as reported in Economic Survey was Rs. 11 Trillion.

<sup>8</sup> Asian Development Bank, Circular Debt impact of power sector investment.

## 1. Circular Debt:

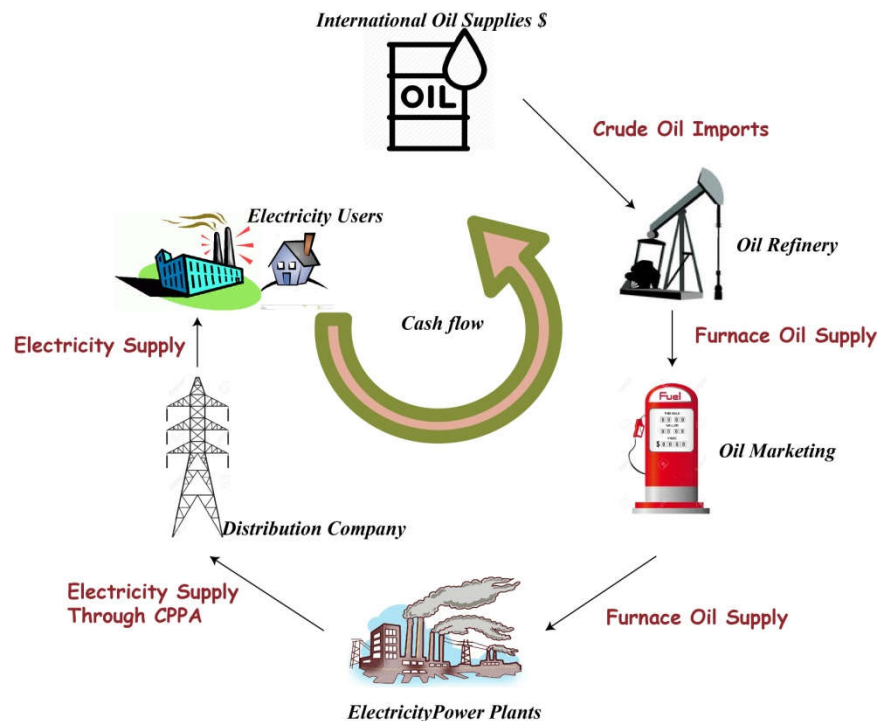
Dynamics of circular debt in the country cannot be clearly understood unless the supply chain of electricity in Pakistan and its tariff determination are studied.

### 1.1 Supply Chain

The supply chain of electricity starts from procurement of crude oil from the international markets which having refined by Oil Refineries like PARCO is transferred to Oil Marketing Companies for instance PSO. Thereon, this oil moves to power generating companies in the supply chain for example HUBCO who then produce electricity. This electricity is purchased by the National Transmission and Dispatch Company (NTDC) through its Central Power Purchase Agency (CPPA).

Central Power Purchasing Agency (CPPA) is currently serving as a central switchboard for managing supply and demand of electricity in the country. It procures electricity from IPPs and transfers it to DISCOs as per their demand to be distributed to the end-customers. The entire supply chain for electricity is presented in Figure 1 below.

**Figure 1:** Electricity Supply Chain in Pakistan (Oil based)



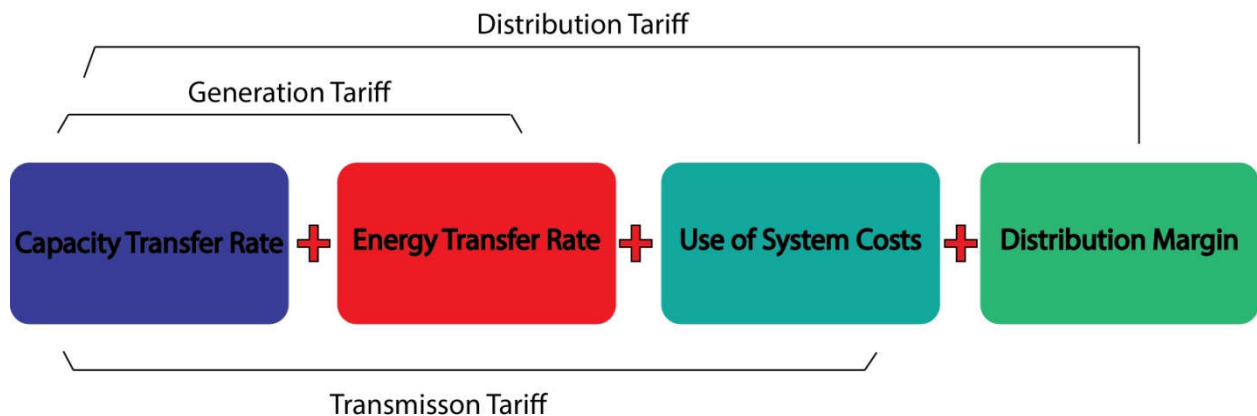
## 1.2 Tariff Determination

The power sector market in Pakistan is a regulated market with NEPA<sup>9</sup> as its chief regulatory body. Therefore, in accordance with Tariff Standard and Procedure Rules, 1998, NEPA determines the tariffs for generation, transmission, and distribution of electricity.

NEPA determines the generation tariffs for IPPs by taking into account the capacity charge and energy charge. The former is the fixed component and is based on erection, procurement, and construction (EPC) cost, land purchase, admin cost, and return on equity among few others. The energy component, which is variable in nature, relates to fuel cost and other operational & maintenance cost.

NEPA then adds system costs for transmitting electricity to the national grid to generation tariff to determine transmission tariff. Thereafter, augmenting this tariff with distribution margins (DM), NEPA determines the price at which DISCOs supply electricity to end-users. The entire process is visualized in figure 2 below:

**Figure 2:** Methodology for setting Tariff



However, NEPA determined distribution tariffs are adjusted by GoP before being notified- and in case, the former is higher, than the government pays the difference which is known as Tariff Differential Subsidy (TDS). For example, to make electricity affordable, GoP was revising NEPA determined prices downward in the past. However, it has now withdrawn from this practice.

## 1.3 History of Circular Debt

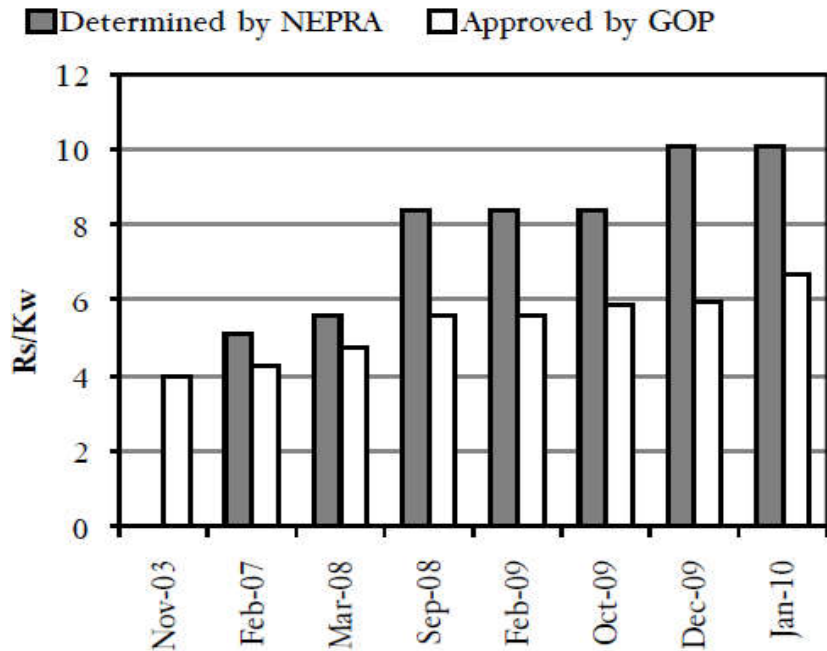
The buildup to circular debt started when NEPA kept the end-user tariffs unchanged between 2003 and 2007 under pressure of GoP even though DISCOs repeatedly requested NEPA to

<sup>9</sup> National Electric Power Regulatory Authority



increase end-user tariffs. When NEPRA finally increased the end-user tariffs after 2007, GoP notified tariffs remained lower as shown in Figure 3.

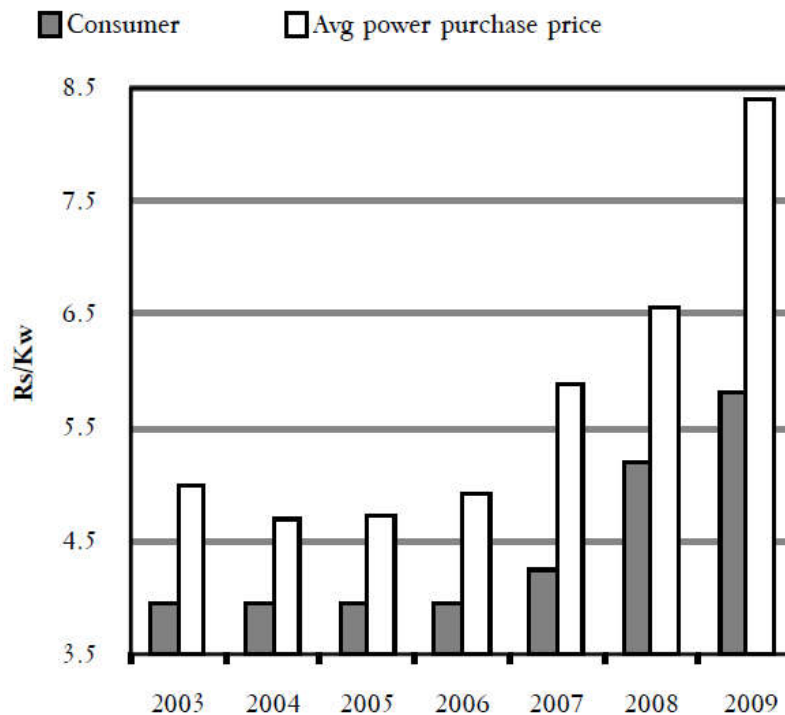
**Figure 3: Tariff Differentials**



Source: Dynamics of Circular Debt in Pakistan and its Resolution (PIDE)

On top of that, the price of generating electricity kept increasing due to three factors: 1) rise in international oil price; 2) a depreciating rupee; and 3) rising inflation. As a result, the wedge between GoP notified tariff and average power purchase price widened due to tariff differential subsidy by GoP. This escalating gap is graphed in figure 4. All of these factors meant that end-user GoP notified tariffs were insufficient to recover cost of producing electricity. This implied that revenues of DISCOs were decreasing and this cash-strain was also spreading further up the supply chain to the income levels of IPPs. However, in response to escalating circular debt, GoP has now withdraw these subsidies except in few instances.

Figure 4: Gap between Power Purchase Price and Consumer Tariff



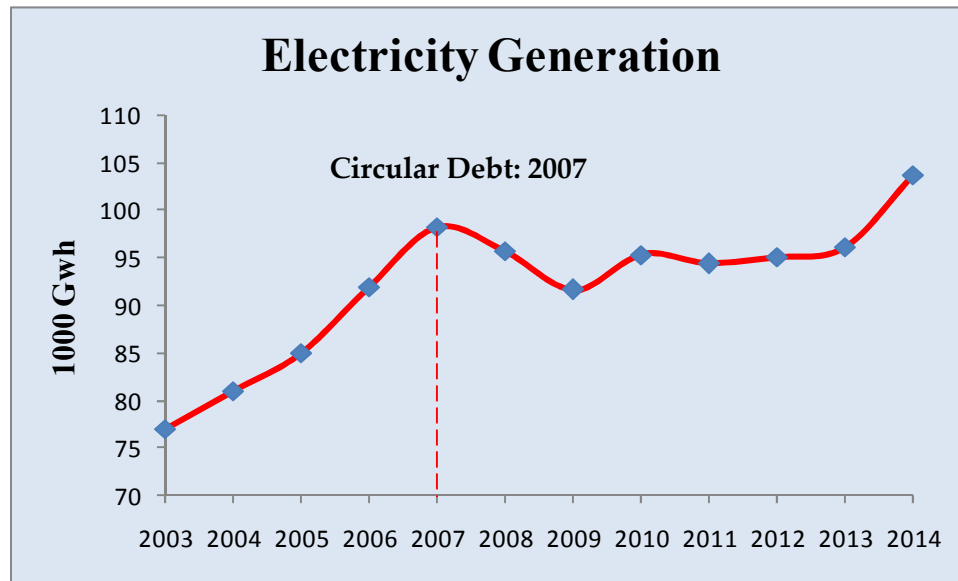
Source: Dynamics of Circular Debt in Pakistan and its Resolution (PIDE)

*Delay in payment of TDS, prompted DISCOs to borrow from commercial banks.*

Moreover, DISCOs were already facing difficulty in recovering dues from both private and public entities. The GoP was also not paying the tariff differential subsidy to the DISCOs. This prompted the DISCOs to borrow from the commercial banks under government guarantees to smooth its operation in 2007. However, the borrowing was not limited to DISCOs alone, since shortfall in payments to IPPs was also reinforced by GoP's inability to pay fuel subsidy which it owed to IPPs.

Subsequently, IPPs also undertook borrowing from commercial banks with government guarantees in 2007. These borrowings both by DISCOs and IPPs aggravated the crisis.

As receivables mounted up from all directions for each major player in the electricity supply chain, power generation reduced in Pakistan. This is shown in Figure 5. What ensued as a result of this circular debt was the menace of load shedding. The inception of circular debt was in year 2007.

**Figure 5: Production of Electricity in Pakistan**

Source: Pakistan Energy Yearbook, Various issues

## 1.4 Causes of Circular Debt

The prime factor that initiated the crisis of circular debt in the economy was tariff differential subsidy as mentioned above. However, this factor was aided by others that played as important a role in perpetuating this crisis. These factors are broadly categorized into two classes in this report: 1) Governance Factors; and 2) Efficiency Factors.

### 1.4.1 Governance Factors:

What makes government and the quality of its governance such a crucial factor in explaining the causes of circular debt is the fact that government is both a major owner and customer of the power sector. The footprints of the government are everywhere in the power sector from generation to transmission to distribution of electricity. Following are the ways in which the ailing governance infrastructure has caused astronomical figures of circular debt:

1. The provincial governments have been passive in reconciliation of electricity bills, payment of tube well subsidy arrears, and payments of provincial governments' electricity bills. For example, the issue of bill reconciliation with Sindh government, government of Balochistan's lack of responsibility in paying tube well subsidies, and the arrears of Rs 19.79<sup>10</sup> billion in the province KPK for year 2012. As of 2013, the shortfall in

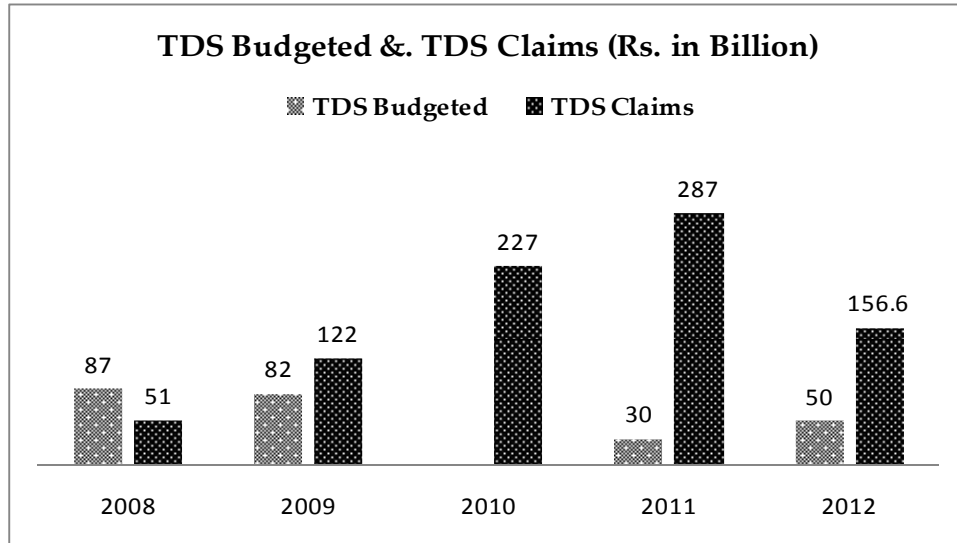
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<sup>10</sup> Source: PEPCO DISCOs Performance Statistics, 2012.

collection of bills clocked in at Rs. 107 billion. It is also noted here that there is also a surcharge on late payments which stood at Rs. 26 Billion in 2013 alone.

2. The Government is also responsible for delay in establishing a legal framework for the power sector with regards to curbing electricity theft and overall governance as a whole. For example, a legal remedy is required to protect DISCOs from revenue loss accrued owing to courts' stay orders or delay in courts' decision on fuel price adjustment. For instance, in 2013, the share of delays in fuel price adjustment in circular debt stock was Rs. 80 Billion<sup>11</sup>. It is noted that the share in total circular debt due to these delays was only Rs. 33.19 billion in 2012<sup>12</sup>. Furthermore, legal grounds on which DISCOs can enforce supply agreements are also lacking.
3. GoP has failed to honor the payment it owes to DISCOs. As a result, the liquidity crunch in the power sector persists. Figure 6 shows that budgeted tariff differential subsidy is well below the TDS claims by DISCOs.
4. To address the issue of circular debt, GoP decreased energy subsidies and contrarily, levied additional GST on the consumers of electricity to meet revenue requirement for DISCOs. However, FBR failed to withdraw these funds and as of 2013 they were Rs. 12 billion in circular debt stocks<sup>13</sup>.

**Figure 6:** Difference between TDS Budgeted and Total Claims



Source: Ministry of Water & Power

<sup>11</sup> Naveed Iftikhar, Genie of circular debt: Can we pay prices of our costs? PRIME Institute, Islamabad.

<sup>12</sup> Asian Development Bank, Circular Debt: Impact on power sector investment.

<sup>13</sup> Naveed Iftikhar, Genie of circular debt: Can we pay prices of our costs? PRIME Institute, Islamabad.

5. Another factor within the realm of governance is the delay in tariff determination and its notification. For example, in FY2012, tariff determination was delayed for nine months for each nine DISCOs and it took an additional one month to be notified by GoP. As a result, customer tariffs in FY2011-12 were based on those of FY2010-11 whereas the actual fuel cost in 2012 was 52 percent higher than the previous year<sup>14</sup>. The Table 1 shows how much time elapsed between petition for tariff by DISCOs, tariff determination by NEPRA, and its notification by GoP in 2012. As of 2013, this delay is responsible for Rs. 80 billion in total circular debt up from Rs. 72 Billion in year 2012<sup>15</sup>.

**Table 1: Delay in the Tariff Process**

<b>DISCO</b>	<b>Date at which NEPRA admits/accepts tariff petition</b>	<b>NEPRA Approval Date</b>	<b>Government Notification Date</b>
<b>FESCO</b>	1 <sup>st</sup> November, 2011	15 <sup>th</sup> March, 2012	16 <sup>th</sup> March, 2012
<b>HESCO</b>	27 <sup>th</sup> September, 2011	8 <sup>th</sup> March, 2012	16 <sup>th</sup> March, 2012
<b>GEPCO</b>	6 <sup>th</sup> June, 2011	13 <sup>th</sup> Dec, 2012	16 <sup>th</sup> March, 2012
<b>IESCO</b>	24 <sup>th</sup> August, 2011	19 <sup>th</sup> January, 2012	16 <sup>th</sup> March, 2012
<b>MEPCO</b>	28 <sup>th</sup> June, 2011	2 <sup>nd</sup> January, 2012	16 <sup>th</sup> March, 2012
<b>LESCO</b>	14 <sup>th</sup> July, 2011	10 <sup>th</sup> January, 2012	16 <sup>th</sup> March, 2012
<b>PESCO</b>	22 <sup>nd</sup> July, 2011	20 <sup>th</sup> January, 2012	16 <sup>th</sup> March, 2012
<b>QESCO</b>	12 <sup>th</sup> August, 2011	10 <sup>th</sup> January, 2012	16 <sup>th</sup> March, 2012
<b>SEPCO</b>	28 <sup>th</sup> November, 2011	30 <sup>th</sup> March, 2012	16 <sup>th</sup> March, 2012

Source: NEPRA Website

<sup>14</sup>USAID, The Causes and Impacts of Power Sector Circular Debt on Pakistan

<sup>15</sup> Naveed Iftikhar, Genie of circular debt: Can we pay prices of our costs? PRIME Institute, Islamabad.

6. A historical flaw in policy choice was the fuel subsidy. This gave incentive to IPPs to produce oil-based energy rather than gas based which is cheaper. Government did this to encourage consumption of CNG in the country. Consequently, with the oil price hike of mid-2000s, the average producer price of electricity increased.
7. Finally, the power sector as a whole is strongly regulated. As a result of this overlapping of authorities of numerous public entities in power sector, the policy making is strained with implication on effective management of circular debt. Moreover, the independence of NEPRA and BoDs' of DISCOs is also compromised which causes governance failures. The overstaffing and appointment on political grounds of officials in DISCOs directly contributes to circular debt.

### 1.4.2 Efficiency Factors

1. The high transmission and distribution losses because of inefficient power infrastructure imply that a large chunk of power is lost within the system without earning a single rupee for that unit of power. However, payment for that lost unit is already owed to IPPs. These losses are well above those allowed by NEPRA both for transmission and distribution losses. This is shown in Table 2. As of 2013, transmission and distribution losses above those allowed by NEPRA were Rs. 29 billion in circular debt. According to a study, a reduction in these losses of all DISCOs by 1 percent would have saved Rs. 7 billion<sup>16</sup>.

2. The tariffs for IPPs are based on heat rates. These heat rates are defined as the amount of fuel consumed for each unit of electricity (kWh) generated. Overtime, as the efficiency of power plants is reduced and their heat rates increased the cost of producing electricity increases as well. It is noted that NEPRA takes into account these heat rates for determining generation tariffs. Since NEPRA allowed heat rates are well below the actual heat rates by IPPs, the generation tariffs for IPPs underestimate the actual cost of electricity. NEPRA allowed and actual heat rates are shown in Table 3 for GENCOs. As a result, the tariffs are not enough to fully recover the cost of producing electricity. This, in turn, reduces income of IPPs causing cash shortages.

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<sup>16</sup> USAID, The Causes and Impacts of Power Sector Circular Debt on Pakistan.

## Circular Debt: State Incentives or Market Rules

**Table 2: Allowed and Actual DISCOs Losses**

DISCOs		2009	2010	2011	2012
LESCO	Actual	13.30%	13.80%	13.30%	13.50%
	Allowed	12.10%	12.00%	12.00%	12.00%
GEPCO	Actual	11.00%	11.00%	12.00%	11.20%
	Allowed	10.70%	11.00%	10.50%	10.50%
FESCO	Actual	10.70%	10.50%	11.20%	10.90%
	Allowed	9.00%	11.00%	10.80%	10.80%
IESCO	Actual	10.80%	9.80%	9.80%	9.50%
	Allowed	11.00%	10.00%	9.50%	9.50%
MEPCO	Actual	18.40%	19.00%	18.30%	17.90%
	Allowed	17.50%	15.00%	15.00%	15.00%
PESCO	Actual	35.20%	34.70%	35.20%	35.10%
	Allowed	33.20%	28.00%	28.00%	28.00%
HESCO	Actual	35.10%	35.10%	33.80%	33.40%
	Allowed	34.00%	34.00%	28.00%	24.80%
QESCO	Actual	20.20%	20.70%	20.80%	20.90%
	Allowed	19.40%	18.00%	18.00%	18.00%
Average	Actual	19.40%	19.60%	19.60%	19.40%
	Allowed	18.40%	16.40%	16.40%	16.00%

Source: The Causes and Impacts of Power Sector Circular Debt of Pakistan (USAID)

**Table 3: Heat Rate – NEPRA allowed and Actual**

<b>GENCOs Heat Rate Comparison</b>		
	<b>NEPRA</b>	<b>Actual</b>
<b>CPGCL (GENCO I)</b>		
<b>Block 1</b>	8533	9153
<b>Block 2</b>	9481	10200
<b>Block 3</b>	11377	13109
<b>Block 4</b>	12189	14041
<b>NPGCL (GENCO III)</b>		
<b>Unit 1-3 (TPS Muzaffargarh)</b>	10788	11677
<b>Unit 4 (TPS Muzaffargarh)</b>	10692	11087
<b>Unit 5-6 (TPS Muzaffargarh)</b>	12158	14164
<b>Units 1 -2 (SPS Faisalabad)</b>	14368	14156
<b>Units 1-4 (GTPS Faisalabad)</b>	15366	17708
<b>Units 5-9 (GTPS Faisalabad)</b>	11707	10259
<b>Unit 1-3 (Multan)</b>	14114	16169
<b>JPCL (GENCO II)</b>		
<b>Unit 1 (Jamshoro)</b>	10655	11505
<b>Unit 2-4 (Jamshoro)</b>	10862	12930
<b>Unit 1-2 (Kotri)</b>	21813	22353
<b>Units 3-7 (Kotri)</b>	10564	11908

Source: The Causes and Impacts of Power Sector Circular Debt of Pakistan (USAID)



## 1.5 Economic Impacts of circular debt

This sub-section briefly presents ways in which circular debt has impacted Pakistan's economy.

### 1.5.1 Private Sector:

As mentioned above, the crisis of circular debt started in 2007 which resulted in nationwide power outages. These outages have placed Pakistan's firms in a precarious state as Pakistani firms face the highest number of power outages of 65 per month<sup>17</sup>. Consequently, it is interesting to note that foreign direct investment was 0.06 as percent of GDP in 2007 and 0.03 as percent of GDP in year 2012<sup>18</sup>. The circular debt during the same time period increased from Rs. 145 Billion in 2007 to Rs. 872.41 Billion in 2012<sup>19</sup>.

Another metric through which this trend can be validated is private investment as percent of GDP. As of 2007, the private sector investment was 12.8 percent of GDP which decreased to 9.73 percent in 2012<sup>20</sup>. Total investment as percent of GDP decreased from 19.21 as percent of GDP in 2007 to 15.08 as percent of GDP in 2012<sup>21</sup>.

On the back of reduced exports of the country have one estimate, energy crisis sector's exports by \$5 billion was lost due to load shedding costing half a million jobs sector<sup>23</sup>.

65

*Number of power outages faced by Pakistani firms per month. This is the highest in the world.*

**Lost**

*Textile exports of worth \$5 billion reduced due to energy crisis.*

private investment, the also reduced. As per has reduced textile billion in FY2011-12<sup>22</sup>. exports worth \$1.3 billion in 2015 and in the industrial

<sup>17</sup> <http://www.indexmundi.com/facts/indicators/IC.ELC.OUTG/rankings>

<sup>18</sup> World Development indicators, 2015

<sup>19</sup> USAID, The Causes and Impacts of Power Sector Circular Debt of Pakistan.

<sup>20</sup> Pakistan Economic Survey, 2014-15

<sup>21</sup> Pakistan Economic Survey, 2014-15

<sup>22</sup> <http://nation.com.pk/business/06-Mar-2012/energy-crisis-to-decrease-textile-export-by-5b>

<sup>23</sup> <http://www.ciitlahore.edu.pk/erc/ERCWP/ERC-WP-2.pdf>

### 1.5.2 Power Sector

Numerous new power projects in the country have been planned and inaugurated, but they are far from completion, which is why load shedding remains a

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*Power sector investment is significantly below the level of 1990s.*

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norm. The overtones of this on power sector investment have been serious. Speaking on this, noted economist Dr. Hafiz Pasha has held that in mid-90s, Pakistan used to import \$2 billion worth of electricity generating machines annually<sup>24</sup>. In 2014, however, only \$400 million worth of electricity generating machines were imported<sup>25</sup>.

### 1.5.3 Fiscal Outlook

Circular debt directly impacts fiscal deficit but government does not recognize it as a liability. This is also argued by leading economist Sakib Sherani that every payment that is a liability on government revenue is part of public debt.<sup>26</sup> To ascertain this fact, Table 4 shows that fiscal deficit increased from 2007 to 2012 along with consistent increase in circular debt for the same time period. Another way to assess its implication on the fiscal stance of Pakistan is to measure it against the denominator of government revenues. In year 2015, total circular debt stock was 26 percent of government revenues up from 13 percent for the year 2013<sup>27</sup>. As a result, as government uses its already scare resources on financing circular debt, it has to reduce its development expenditure which compromises

#### Box 1: Jamshoro Power Plant – Much Trumpeted and much lagged

GoP is to generate 1,320 megawatts of electricity from \$1.5 billion Jamshoro coal-fired power plant by the end of 2018.

However, a recent report by Asian Development Bank (ADB) comments the following with regards to its implementation status:

*“As of January 2016, no construction, rehabilitation or remediation activities had commenced on the site and none is envisaged to commence until the first quarter of 2017”.*

Financial progress is also lagging, as against an approved loan of \$900 million by ADB, only \$6 million are disbursed. One reason for this, highlighted by ADB, is that Ministry of Water and Power wasted significant time in finalizing the bid documents.

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<sup>24</sup><http://www.towelassociation.com/userfiles/files/March/08-3-2014/Investment%20in%20power%20sector%20remains%20low.pdf>

<sup>25</sup> Ibid.

<sup>26</sup> PRIME Institute, 2<sup>nd</sup> National Debt Conference Proceedings.

<sup>27</sup> Total Government Revenue was Rs. 2982 billion in FY2012-13 and Rs. 2510 billion in FY2014-15 (Jul-Mar). Circular Debt was Rs. 359 billion in 2013 and Rs. 648 billion by end-June 2015.

**Box 2: Circular Debt – A Potential Fiscal Crisis.**

*Independent Power Producers Advisory Council (IPPAC) issued an ad in the mainstream newspapers by the title of “Government on the verge of sovereign default” in 2014 and 2015.*

*In the ad, IPPAC threatened to call sovereign guarantees under which it took loans from commercial banks in case GoP didn’t release their payments.*

*The GoP did neutralize the situation, but in case it hadn’t, GoP would have had a total sovereign default of Rs. 40 billion in 2014 only.*

*This would have curtailed the much needed financing in the power sector.*

development endeavors in the country. It is interesting to note that development expenditure of the government as percent of GDP has decreased from 4.6 percent in FY2006-07 to 3.7 percent of GDP in FY2011-12<sup>28</sup>. Moreover, the public investment as percent of GDP has also reduced from 4.8 percent in 2008 to 3.75 percent in 2012<sup>29</sup>.

**Table 4: Fiscal Deficit and Circular Debt**

Year	Fiscal Deficit (% of GDP)	Circular Debt (Billion Rs.)
2007	4.1	144.99
2008	7.3	161.21
2009	5.2	235.65
2010	6.2	365.66
2011	6.5	537.53
2012	6.8	872.41

Source: PBS and The Causes and Impacts of Power Sector Circular Debt of Pakistan (USAID)

## 2. Solution:

The section covers how government has planned to address the causes of circular debt along with its associated pitfalls. Finally, this report argues that structural reforms through privatization can help cure the system from crisis in the future.

### 2.1 Circular Debt Reduction- Government’s Approach:

1. With regards to high transmission and distribution losses, NEPRA has increased the percentage of allowed T&D losses. This has increased tariffs that DISCOs can charge. In this way, NEPRA determined tariffs can recover for some of these high losses as well. Perspective

<sup>28</sup> PBS, 2014-15.

<sup>29</sup> Ibid.

privatization of DISCOs, GoP expects, can reduce the transmission and distribution (T&D) losses. This will realize since private owners have more incentive to reduce losses to increase profits.

***Pitfall:** Three DISCOs are to be privatized this year. However, no significant headway has been made in this regard. Along with this, the privatization process of these DISCOs shows lack of transparency on part of the government as political considerations routinely masks matters of sound policy aptitude. This may endanger the governance of the system still further. On top of that, GoP is proceeding with privatization of profitable DISCOs only and not those notorious for high losses<sup>30</sup>.*

2. To recover payments owed to DISCOs, GoP intends to outsource the recovery to the private sector. As for recovering the payments owed by the Federal and Provincial governments, Ministry of Water and Power (MoWP) will notify DISCOs that nonpayment beyond 45 days should result in disconnection. MoWP will also propose the Council of Common interests (CCI) for stringent requirement for provincial departments in the event of non-payment of electricity bills.

***Pitfall:** MoWP's authority in policy making has been diminishing overtime. No rulings of MoWP are bidding unless GoP validates it. As a result, implementation of any ruling by MoWP remains ineffective. Moreover, the meetings of CCI are irregularly convened in the past. This is evident by the fact that CCI meeting was called after nine month long gap by Prime Minister in 2015<sup>31</sup>. Resultantly, receivables owed by government are expected to increase to Rs.29 billion from its current level of Rs.22 billion<sup>32</sup>.*

3. Tube-well owners were charged 6000 per month/tube-well. Amounts between Rs. 6,000 and Rs. 75,000 per month were to be paid by federal government and Government of Balochistan. These subsidies were not paid by either government. To address this, GoP has increased tube well price to Rs. 10, 000 per month per customer. Moreover, GoP has decided to disconnect those customers who fail to pay either up to Rs. 10, 000 or above RS 75, 000.

***Pitfall:** It is interesting to note that no mechanism is laid out by the government regarding how it will pay the tube-well subsidies between Rs. 10,000 and Rs. 75,000.*

4. Government is relying on privatization and its proceeds in two ways. First, it intends to write-off debt accrued by DISCOs through privatization proceeds. Second, it believes that once privatization is carried out, privatized DISCOs will be in a better position to address delays in tariff determinations.

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<sup>30</sup> <http://nation.com.pk/business/24-Oct-2015/govt-selling-only-profit-making-DISCOs-in-first-phase>

<sup>31</sup> <http://www.dawn.com/news/1170145>

<sup>32</sup> Government of Pakistan, 2015, "Managing Circular Debt", Ministry of Water and Power, Islamabad.

***Pitfall:** Privatization of DISCOs is marred due to factors like lack of transparency in the privatization process. The GoP has also recently indicated to the IMF that it has stopped the privatization of DISCOs<sup>33</sup>. It is also noted that any attempt by the GoP in privatizing DISCOs in the past has been slow. Privatization program also confronts political opposition which is supplemented by resistance from employees working in the utilities<sup>34</sup>.*

5. In case of tariff differential subsidies, GoP has opted for two ways to circumvent it. First, GoP has transferred the burden of owed TDS to profit making DISCOs. Secondly, it has levied GST on customers of electricity to pay owed TDS.

***Pitfall:** Government policy can tell economic agents what to do and what not to do. By transferring its own burden of TDS on profitable DISCOs, it is protecting inefficient DISCOs. In this way, it is telling them not to be efficient. This can give them incentive not to address high T&D losses. As for GST approach, FBR has not withdrawn funds collected under this tax.*

## 2.2 The Case for Market in the Power Sector

Government may show reduction in Circular Debt due to its financial engineering but if robust structural reforms are not carried out in the power sector its potential reemergence can't be ruled out. The Power Policy of 2013 does contain most of these structural reforms but the political intent of the government is weak and lacking. This sub-section covers the reforms that this report argues as a solution to circular debt. .

### 2.2.1 Replace CPPA with a Whole Sale Power Market:

A whole sale market instead of CPPA can be more efficient in aligning supply and demand of electricity. In such a market, large bulk consumers of electricity can procure electricity from the supplier they deem appropriate while DISCOs in such an arrangement are only to deliver much like the same role it currently undertakes. Notice in this way, any difference between the price of procurement and end-user tariff will vanish forthwith. NEPRA's role in this market should only be limited to ensuring competition and consumer protection.

<sup>33</sup> <http://timesofindia.indiatimes.com/business/international-business/Pakistan-not-to-privatize-power-firms-angering-IMF-Sources/articleshow/50846201.cms>

<sup>34</sup> United States Institute of Peace, Pakistan's Power Crisis: The Way Forward.

**[ PAKISTAN HAS  
SHELVED PLANS TO  
PRIVATIZE ITS  
POWER SUPPLY  
COMPANIES. ]**

### 2.2.2 DISCOs need to be privatized:

DISCOs were meant to be independent in their operation. However, they have essentially become de facto State-owned enterprises (SOEs). SOEs are means through which political objectives are achieved by the government. Thus, there is more incentive to keep SOEs in traditional inefficient structures, instead of well governed entities. Consequently, DISCOs are overwhelmed by rampant political intervention which makes them economically costly<sup>35</sup>. These SOEs are marred by weak governance. Notable features exemplifying weak governance practices in DISCOs are:

1. Overstaffing based on political grounds.
2. Political appointment of company CEOs.
3. Poor Corporate Management and performance.

These weaknesses are unprofitable and inefficient SOEs can revamp them understand. Private owners have incentive to make but also to expand scale of performance post-testament to the value that example, K-electric has since 2009<sup>36</sup> and has brought areas to zero.

**“COSTLY”**

***SOEs drained \$5 billion from state coffers in 2015.***

characteristic of any other SOEs. Privatization of these completely. This is not hard to with their profit motive not only amends for system governance production. K-electric privatization can serve as a privatization can bring. For added 10 new Grid Stations load shedding in the industrial

### 2.2.3 Reduction in technical losses

NEPRA determines tariff for DISCOs incorporating T&D losses. This coverage has given perverse incentive to the DISCOs which now have T&D losses well above those allowed by NEPRA. This has directly resulted in build-up of circular debt as covered before. Privatization of DISCOs can address this since private DISCOs will attempt to minimize the loss in revenue

<sup>35</sup> In 2015, SOEs drained \$5 billion from state coffers.

<http://timesofindia.indiatimes.com/business/international-business/Pakistan-not-to-privatize-power-firms-angering-IMF-Sources/articleshow/50846201.cms>

<sup>36</sup>PRIME Institute, State Incentives or Market Rules. Islamabad

that arises as a result. The case of K-electric is instructive in this regard as well. Since privatization, K-electric has substantially reduced T&D losses<sup>37</sup>.

On the production side, privatization of GENCOs can also be helpful. As noted above, tariff rates for GENCOs are determined in line with the heat rate of the plants. In a privatized market, GENCOs will have incentive to reduce their heat rates which can reduce cost of producing electricity. This will improve their profits margins.

Private ownership also encourages technological sophistication and innovation that can increase technical efficiency. Here again experience of K-electric can be worthwhile. K-electric has implemented a new technology and numerous other projects like smart grid and mobile application for meter reading<sup>38</sup>. Such endeavors reduce costs.

### 2.2.4 Prospects for higher efficiency

Circular debt started piling up as the gap between average producer price and GoP notified tariff widened. One reason for this was increase in oil price. The price for other energy sources like coal and gas are cheaper than oil in Pakistan<sup>39</sup>. Unless policies like fuel subsidy are in place, GENCOs with their profit motives may attempt to reduce their cost by producing electricity using cheaper energy sources.

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<sup>37</sup> Ibid.

<sup>38</sup> Ibid.

<sup>39</sup> <http://www.brecorder.com/fuel-a-energy/193:pakistan/1239142:cheaper-sources-of-power-generation-pakistan-uses-004-percent-coal-against-worlds-41-percent/>



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