STUDY ON STRESSED POWER SECTOR OF INDIA

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Declaration by the Guide

This is to certify that the Mr.Ankit Kumar Singh, a student of (MBA Power), SAP ID500065948 of UPES has successfully completed this dissertation report on "STRESSED POWER SECTOR OF INDIA" under my supervision.

Further, I certify that the work is based on the investigation made, data collected and analyzed by him and it has not been submitted in any other University or Institution for award of any degree. In my opinion it is fully adequate, in scope and utility, as a dissertation towards partial fulfillment for the award of degree of MBA.

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ABSTRACT

India's energy sector is one of the most critical components of an infrastructure that affects India's economic growth and therefore is also one of the largest industries in India. India has the 5th largest electricity generating capacity and is the 6th largest energy consumer amounting for around 3.4 % of global energy consumption. India's energy demand has grown at 3.6 % pa over the past 30 years, in spite of such huge figures India's power sector is going through a tremendous stress of NPA in power sector.

According to recent news, the leading banks of India are designing a scheme for bailing out stressed assets in the power sector, which, as per the latest report of Parliamentary Standing Committee on Energy, are in the tune of Rs. 70,000 crores.

RBI rejected the request from the Power Ministry to give a breather for the power industry. With the introduction of Insolvency and Bankruptcy Code (IBC), RBI has directed banks to start insolvency proceedings against failing industries. Given this context, the willingness of the key lenders to design a bail-out plan for power companies outside the IBC route assumes much significance. Even in the current proposal, banks buying the equity of the stressed companies in the power sector, or using a separate agency would be a flawed decision, as banks or the agency would lack the expertise to execute a power project successfully.

In this research present and future energy scenario in India is discussed. India's growing economy has forced the country to increase installed power capacity to 200 GW this year. Despite this growth in supply, the country is still facing major challenges in providing electricity access to all the households and also improving reliability and quality of power supply. Its power systems are struggling to overcome power shortages and poor power quality. The major constraint in achieving the target is shortage of capital resources. Shortages are exacerbated by inefficiencies in power generation, distribution and end-use systems.

Till date no proper research has been carried out on this issue and from our research we wants to give a proper focus on this issue and there is an immediate need for change in planning strategies from the traditional approach of increasing generation to meet in disciplined consumption to need, resource and conservation based approach for economic and environmental benefits.

TABLE OF CONTENTS

CHAPTER 4: ANALYSIS ON POWER SECTOR NPA

CHAPTER 5: RECOMMENDATIONS AND CONCLUSIONS

Chapter:1- INTRODUCTION

Power companies fear that two-thirds of private thermal power capacity is at high risk of being declared as non-performing assets (NPA), following the new norms on stressed assets issued by the RBI, according to industry executives.

The severe impact is expected on 51,000-MW existing power generation capacity set up with investments of more than Rs 4 lakh crore, and other 28,000-MW plants are under construction.

According to the Association of Power Producers (APP), 19,700MW of private sector power projects are complete but have no power purchase agreement (PPA), and 20,700MW of projects are under consideration and another 11,700 MW of projects are stressed due to regulators not allowing them to charge what the law permits.

Currently, about 85,000-MW private sector thermal assets are under operation. Most of these are severely stressed due to various reasons such as lack of coal supply, lack of long-term power purchase agreements and inordinate delays in regulatory orders and receivables from distribution companies.

In regard to falling Plant Load Factors (PLF) of thermal power plants, the Ministry have stated that large capacity addition in capacity has led to lowering of overall PLF of thermal units from 78.8% in 2006-07 to 60.01% in 2016-17. The resultant scenario of moderate power off taking has affected the IPPs capacities planned without tie-up of necessary PPAs with distribution companies.

The Parliamentary Standing Committee on Energy has confirmed that lending institutions are looking at bad loans worth Rs 1.75 lakh crore, which, they are yet to classify as non-performing. This is 20 percent of the banking sector's overall non-performing assets (NPAs), which is Rs 8.40 lakh crore, as of the end of December 2017.

Adding to the stress that India's power sector is going through, on February 12, 2018, the RBI issued a notification on 'Resolution of Stressed Assets—Revised Framework', listing out more stringent norms on the declaration of NPAs.

1.1 (Background Of The Story)

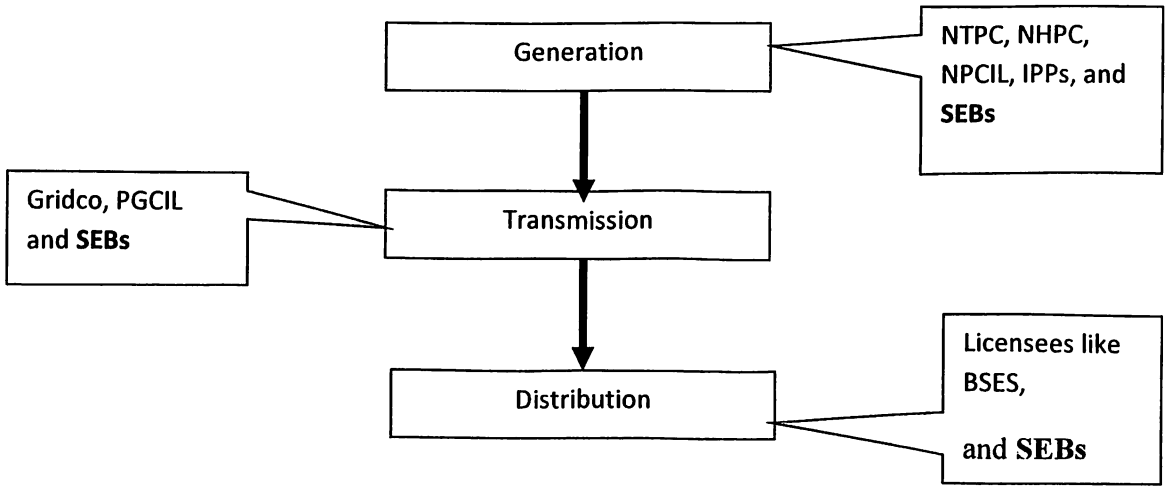
As per our Constitution, power industry is the combined responsibility of the Central Government and the State Governments. The ESA (Electricity Supply Act) envisaged three kinds of entities in the power-sector: State Electricity Boards (SEBs), generating companies, and licensees. SEBs are allowed to generate, transmit, and distribute electricity within a state; they enjoy all the powers of a licensee. They account for 65 per cent of the power generated in the country.

Generating companies are responsible for supplying power to the grid without the specific responsibility of retail distribution. Major players in this category are NTPC (National Thermal Power Corporation), NHPC (the Hydro-electric analogue of NTPC), and NPCIL (Nuclear Power Corporation of India Limited). Though ESA allowed only the governments to set up generating companies till 1991, thereafter it was de-reserved. Independent Power Producers (IPPs) now fall under this category.

Existing licensees are private-sector utilities licensed by a State Government for power generation, distribution, or both within a specified area. For example, Gujarat Industrial Power Corporation is only into generation and Central Electricity Supply Corporation (in Orissa) is confined to distribution, whereas Bombay Suburban Electric Supply Limited (BSES) and Tata Electric Company (TEC) are involved both in generation and distribution.

The interdependence among these players in the electricity sector can be gauged from the fact that their performances are closely linked. The industry value-chain is captured by Chart-1 below. (PGCIL is the Power Grid Corporation of India Limited.)

Chart - 1



Some instances of such interdependence are easy to find. High generation tariffs affects the performance of SEBs and transmission companies, just as MSEB (Maharahstra State Electricity Board) got badly affected by the high tariff imposed by Dabhol Power Company.

1.2 Review Of literature

In 2016, Raghuram Rajan, ex-Governor of RBI, while addressing the Public Accounts Committee, highlighted some of the main reasons for the growing NPAs within the banking sector. These include

- Overall economic slowdown
- Delays in statutory and other approvals for projects under implementation
- Aggressive lending practices during upturn as evidenced by high corporate leverage
- Laxity in credit risk appraisal, loan monitoring in banks
- Lack of appraising skills for projects that need specialised skills, and
- Wilful default, loan frauds and corruption

This scenario, despite being grim, gives an excellent opportunity to the banking regulators to make suitable reforms that would prevent the occurrence of such scenarios in the future.

Three of the six causes highlighted above—delays in statutory and other approvals for projects under implementation, laxity in credit risk appraisal and loan monitoring in banks and lack of appraising skills— highlight the current gaps in existing appraisal and monitoring process of the banks as well as their lack of internal capacity.

1.3 Problem Statement

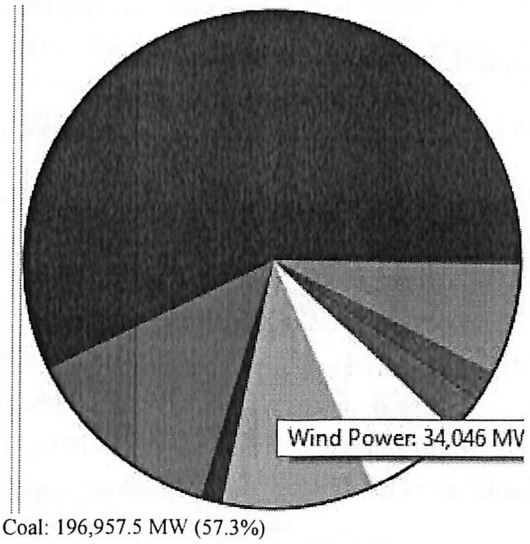
During the discussions with the various Ministries/Banking Institutions/Stakeholders, the following issues were identified which are responsible for financial stress in the said thermal power projects: • Non-availability of Fuel: – Cancellation of coal block. – Projects set up without Linkage. • Lack of enough PPA by states • Inability of the Promoter to infuse the equity and working capital • Contractual/Tariff related disputes • Issues related to Banks/Financial Institutions (FIs). • Delay in project implementations leading to cost overrun. • Aggressive bidding by developers in PPA.

1.4 Need For The Research

The Ministry of Power has stated that Power Generation growth (CAGR) was 6.1% from 2004-14 and 6.8% from 2014-2017. With robust growth in Generation Capacity, Energy shortage has reduced from is 42,428 MU (4.2%) in 2014 to 7,459 MU in 2017 (0.7%).Peak demand shortage has reduced from 6,103 MW (4.5%) in 2014 to 2,608 MW (1.6%) in 2017. India has turned around from a net importer of electricity to net exporter of electricity exporting around 5,798 Million Units to Nepal, Bangladesh and Myanmar in 2017.

1.5 Objective Of The Study

- To understand the further degree of divergence will come in power sector of India as presently the present power generation capacity in the country as on April 2018 is:



Coal: 196,957.5 MW (57.3%)
Large Hydro: 45,293.42 MW (13.2%)
Small Hydro: 4,485.81 MW (1.3%)
Wind Power: 34,046 MW (9.9%)
Solar Power: 21,651.48 MW (6.3%)
Biomass: 8,839.1 MW (2.6%)
Nuclear: 6,780 MW (2.0%)
Gas: 24,897.46 MW (7.2%)
Diesel: 837.63 MW (0.2%)

- To analyse the further issues due to which the power sector of India is under stress.
- To identify the improvement areas which can be marked & suggested so that further the development won't be hinder the nation's growth.
- Improvement/ Amendments needed in "Electricity Act" which states that Electricity Act 2003 has been enacted and came into force from 15.06.2003. The objective is to introduce competition, protect consumer's interests and provide power for all. The Act

provides for National Electricity Policy, Rural Electrification, Open access in transmission, phased open access in distribution, mandatory SERCs, license free generation and distribution, power trading, mandatory metering and stringent penalties for theft of electricity.

It is a comprehensive legislation replacing Electricity Act 1910, Electricity Supply Act 1948 and Electricity Regulatory Commission Act 1998. The Electricity Act, 2003 has been amended on two occasions by the Electricity (Amendment) Act, 2003 and the Electricity (Amendment) Act, 2007. The aim is to push the sector onto a trajectory of sound commercial growth and to enable the States and the Centre to move in harmony and coordination.

1.6 Research Methodology

A research method is a systematic plan for conducting research. Sociologists draw on a variety of both qualitative and quantitative research methods, including experiments, survey research, participant observation, and secondary data. Quantitative methods aim to classify features, count them, and create statistical models to test hypotheses and explain observations. Qualitative methods aim for a complete, detailed description of observations, including the context of events and circumstances.

Qualitative research is a type of scientific research. In general terms, scientific research consists of an investigation that: • seeks answers to a question • systematically use a predefined set of procedures to answer the question • collects evidence • produces findings that were not determined in advance • produces findings that are applicable beyond the immediate boundaries of the study Qualitative research shares these characteristics. Additionally, it seeks to understand a given research problem or topic from the perspectives of the local population it involves. Qualitative research is especially effective in obtaining culturally specific information about the values, opinions, behaviours, and social contexts of particular populations.

The advantage of qualitative methods in exploratory research is that use of open-ended questions and probing gives participants the opportunity to respond in their own words, rather than forcing them to choose from fixed responses, as quantitative methods do In our pretext we will use the qualitative method for our research.

1.7 Sources Of Data

In research, there are different methods used to gather information, all of which fall into two categories, i.e. primary and secondary data. As the name suggests, primary data is one which is collected for the first time by the researcher while secondary data is the data already collected or produced by others. There are many differences between primary and secondary data, which are discussed in this work. But the most important difference is that primary data is factual and original whereas secondary data is just the analysis and interpretation of the primary data. While primary data is collected with an aim of getting the solution to the problem at hand, secondary data is collected for other purposes. The

fundamental differences between primary and secondary data are; the term primary data refers to the data originated by the researcher for the first time while secondary data is the already existing data collected by the investigator agencies and organizations earlier. Primary data is a real-time data whereas secondary data is one which relates to the past. Primary data is collected for addressing the problem at hand while secondary data is collected for purposes other than the problem at hand. Primary data collection is a very involved process. On the other hand, secondary data collection process is rapid and easy. Primary data sources include surveys, observations, experiments, questionnaire, personal interview etc. on the other contrary, secondary data collection sources are government publications, websites, books, journal articles, internal records etc.

1.8 Sampling

Nonprobability sampling refers to sampling techniques for which a person's (or event's or researcher's focus's) likelihood of being selected for membership in the sample is unknown. Because we don't know the likelihood of selection, we don't know with nonprobability samples whether a sample represents a larger population or not. But that's OK because representing the population is not the goal with nonprobability samples. That said, the fact that nonprobability samples do not represent a larger population does not mean that they are drawn arbitrarily or without any specific purpose in mind (once again, that would mean committing one of the errors of informal inquiry

1.9 Expected Outcome Of The Research

It has been estimated that all coal-based thermal power plants need to brace for drastic fall in capacity utilisation to as low as 48 percent by 2022 as additional non-thermal electricity generation capacities come on stream.

Installed capacity from different fuel types at the end of 2021-22 in base case works out to be 523 Gigawatts including 50 GW of coal-based capacity addition currently under construction and likely to yield benefits during 2017-22.

"In order to accommodate high quantum of renewable energy into the grid, thermal plants are likely to run at low plant load factor (capacity utilisation) in future.

It has been further stated that during an era of shortages, the power plants were running at full capacity even during off-peak hours and during peak hours there were energy shortages. Currently, we are able to meet the peak demand of the country and hence plant loading during off-peak hours shall be lesser. This is leading to lower overall PLF which is an indicator of sufficient capacity to meet the peak demands. A huge growth in capacity addition in 12th Plan resulted in moderate utilization of available capacity. However, efforts are being made by the Government to enhance the electricity demand through various initiatives.
So by understanding the problems India's power sector is facing presently what remedial action will need to be taken up to improve the condition can be pointed out and what direction India power sector will take in next five years can be predicted through this research.

CHAPTER-2
CAUSES & DEVELOPMENTS OF SLOW GROWTH IN POWER SECTOR

2.1 Recent Developments On NPA

In March 2018, the Minister of Power R.K. Singh had told media that the State-owned firms NTPC, REC and PFC were planning to float a Special Purpose Vehicle (SPV) to operationalize stressed assets of 25,000 MW in the first tranche, where the SPV would take over the plant for a temporary period, till the time the lenders can extract a fair value from the stressed asset. Now the ministry has asked the RBI for relaxation to stressed power projects. This not only shows that power sector, especially coal power projects, are under severe threat, but also indicates that how the government is in a hurry to bail out the private sector companies. What is lacking is that the government still does not want to scrutinise the loopholes – like delicensing – in the power sector policies. By bringing in delicensing in power generation, through Electricity Act, 2003, the Government had removed the need for obtaining a license for setting up a power plant by the private companies, which resulted in unplanned capacity addition, which is one of the major reasons behind mounting stressed assets in power sector. Banks resorting to designing a scheme for bailing out stressed assets outside the IBC route, within a year of the promulgation of IBC, only shows the lack of the faith of the banks in IBC/NCLT mechanism and this also brings us back to the question of faulty lending practices of the banks, which has led to accumulation of huge stressed assets in power sector. The banks are looking at two possible options to recover debt: firstly, by converting its debt into equity; and secondly, by bringing another promoter or run the project along with them till they recover the money. Neither of the options is viable as it is highly doubtful if banks would get the desired results. Converting debt into equity does not necessarily help in recovering the losses. Moreover, running companies is not the expertise of the banks and may not necessarily result in any profits.

The problem being faced by the banks is quite grave as stressed assets in power sector have continuously increased. India's biggest bank, SBI, has 30% share in stressed assets in power sector. The Parliamentary Standing Committee on Energy has recognised the problem of NPAs and stressed assets in the power sector and came out with a report on this in March 2018. The Committee had even called for a meeting with all stakeholders to do a comprehensive assessment of the problem.

The Parliamentary Standing Committee on Energy found that out of the total outstanding debt of Rs.5.59 lakh crores in power sector, 18% (Rs. 98,799 crores) is stressed. The total gross NPA stands at Rs.37,941 crores in the power generation alone. The Committee has identified 34 power projects with the installed capacity of 40,000 MW, with a total outstanding debt of Rs.1.75 lakh crores facing serious stress. Out of these 34 power projects, 32 of the power

projects belong to the private sector. The report also mentions that among power Generation, Transmission and Distribution, 91 percent of the stressed assets belongs to power generation. The Committee observed that the frantic push to bring private companies in thermal power sector through Electricity Act, 2003 as one of the major reasons behind a large number of stressed assets.

However, the banks are not stopping their investments in the coal power sector. The latest report of Bank Track on financing coal titled 'Bank Vs Paris Agreement' says that Indian banks have financed heavily in coal power sector. According to the report, between January 2014 and September 2017, 23 Indian banks lent around Rs.1,15,000 crores to 10 Indian companies operating the coal-based power projects. The State Bank of India alone invested around Rs. 56,830 crores in the coal companies in the same period.
Instead of trying to bail out the stressed power sector, the Government should look into loopholes in policies. The Government should assess the viability of the projects, along with comprehensively assessing the need of nation's electricity requirement to ensure that the haphazard capacity addition by the private sector is reviewed from time to time. Before giving clearances to new power projects, the Power Purchase Agreements (PPA) and Letter of Assurance (LoA) of coal supply for the projects should be in place.

Likewise, the banks should stop further lending to the coal power sector. They must look critically at their lending practices and due diligence process. The lenders should recover the debt from the companies and their promoters, instead of resorting to recover money from common people in the name of the charges for withdrawing money or not keeping a minimum balance in the account.

Firstly quoting from your article: "The banks are looking at two possible options to recover debt: firstly, by converting its debt into equity; and secondly, by bringing another promoter or run the project along with them till they recover the money. Neither of the options is viable as it is highly doubtful if banks would get the desired results. Converting debt into equity does not necessarily help in recovering the losses." An alternative to the two possible options was to be expected. Anyways, thats an alternative we don't like to spend time on. One needs to critically look at IBC to understand whats transpiring, and especially Section 29A of the IBC, where there is a need to differentiate between genuine distress and mismanagement, and this puzzle could be solved by taking recourse to rating agencies (sorry, for the time being, such devils are the only mechanism we have recourse to), who could devise a framework to differentiate between the two. Further, bidding norms for small and medium enterprises (and aren't there small and medium power units in distress?) could be relaxed a bit as large number of cases are going towards liquidation for want of bidders. Differentiating financial investors from existing promoters, in order to ensure they don't become ineligible in case of unsuccessful turnarounds could be a way out. I don't think it is as simple as banks trying to bail out power sector in an effort to kickstart them afresh. What banks find difficult, and in that, it is a technical issue is ambiguity towards differentiated rights for priority funding. Clearer rights to priority funding can help contain NPAs. First, enabling access to timely funding would keep an asset from coming under IBC. Second, if an asset does come under NCLT, access to priority funding at

reasonable rates can preserve asset values, and attract more bidders and help in faster resolution. Whats happening in power sector is precisely banks trying to learn this mechanism in a hurry and thus seemingly giving an impression that a bail-out is in process.

2.2 Role Of NTPC In this Issue

Power Minister Piyush Goyal said that National Thermal Power Corporation (NTPC) has no proposal to acquire stressed power projects or enable their lenders to operate on contract basis as of now.
Power Minister Piyush Goyal said that National Thermal Power Corporation (NTPC) has no proposal to acquire stressed power projects or enable their lenders to operate on contract basis as of now.

Goyal also informed that the government has reviewed the status of 34 stressed Thermal Power Projects, as per the list provided by Department of Financial Services (DFS), with an estimated debt of about Rs. 1.77 lakh crore.

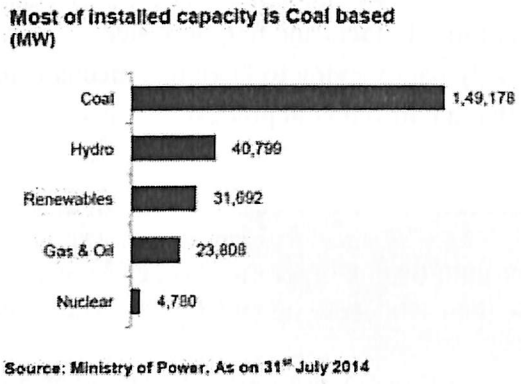
As per DFS data, the total advances towards electricity generation sector reported by Scheduled Commercial Banks (SCBs) is about Rs. 4.71 lakh crore and most of them are stranded assets.

Neyveli Lignite Corporation of India Limited (NLCIL) has identified Ragunathpur Thermal Power Station- Phase-I (2x660 MW), a stressed asset of Damodar Valley Corporation (DVC) for acquisition. NLC has also shortlisted two suitable stressed power assets for possible acquisition to augment its power generation capacity, he added.

2.3 Effects Of Coal Scam On power Sector

The crucial role played by coal in India's industrial and economic fortunes was recently emphasized by the Supreme Court's observation – "Coal is king and paramount Lord of industry ... Industrial greatness has been built up on coal ... In India, coal is the most important indigenous energy resource and remains the dominant fuel for power generation ... " A quick look at where the Coal and Power sectors stand today in India.

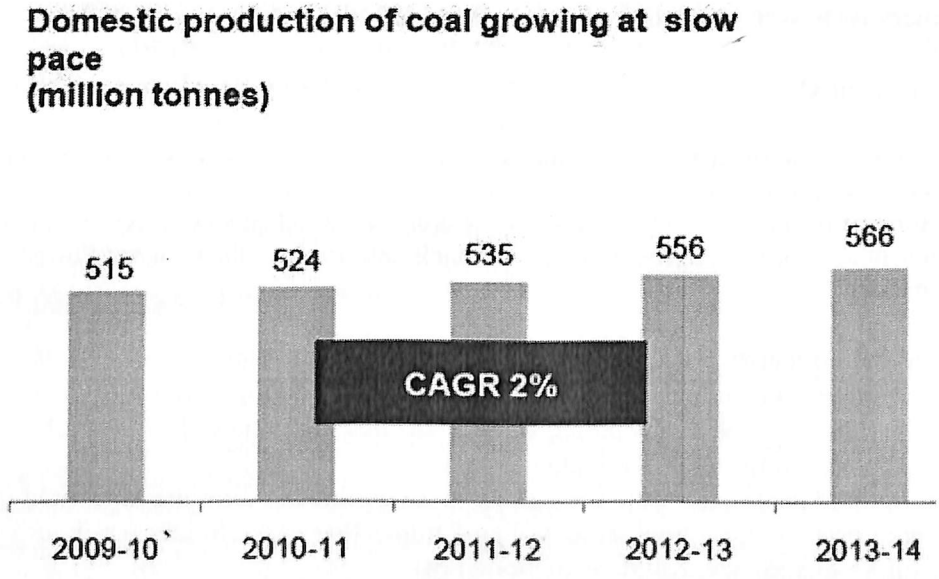
The Central Government allocated 218 coal mines to PSUs and private companies between 1993 and 2010. These mines contribute about 9% of India's coal production. In a landmark judgement on 24th September 2014, the Supreme Court cancelled allocation of 214 out of these 218 captive coal blocks terming them illegal.
The Government of India plans to reallocate the 42 operational mines to Coal India Limited or other public sector enterprise. Other non-operational coal mines that have already acquired land as well as regulatory clearances would be auctioned off.



Source: Ministry of Power, As on 31st July 2014

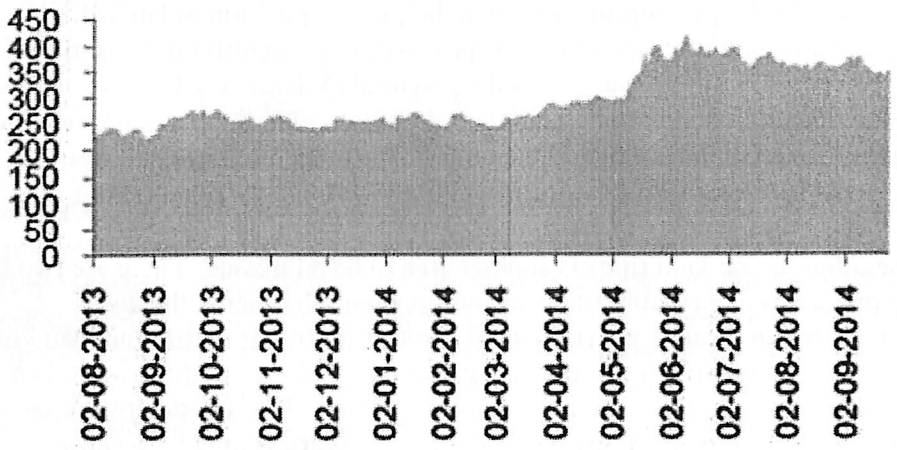
Going ahead, it is expected that the Government will amend the Coal Mines Nationalization Act, 1973 and Mine Minerals (Development and Regulation) Act, 1957 to promote private participation in Coal Mining. However, these steps are expected to show results only in the long term.

Similar to the rest of the world, India depends on coal for most of its electricity production. India has about 300 billion tonnes (Source: Ministry of Coal) of proven coal reserves but the real challenge is to be able to realize this mineral wealth in an economically sustainable way. At the time of independence, most coal mines were privately owned. However, the Government of India acquired all privately held coal mines and brought them under Coal India Limited (CIL) in 1973. Today, CIL is the predominant producer of coal in the country, while some coal is also produced by Singareni Collieries and Coalfields Ltd. (SCCL), a few privately owned mines and captive mines. The Government of India holds 90% stake in CIL.



Source: Ministry of Coal

CIL share price movement, BSE (Rs.)



Source: Yahoo Finance

Poor performance of power companies and a high valuation for Coal India simultaneously have been a norm of late. The new Government has taken progressive steps, starting with combining coal and power ministries. Growth in coal production however faces immediate challenges.

The power sector, two-thirds of whose output is from coal, made it to the endangered list. Banks which have pumped in huge amounts to finance projects related to the coal blocks have been left exposed. Senior officials say as many as 12 major power projects, involving an investment of Rs 36,000 crore for a projected generation capacity of 7,230 MW, are crippled by a shortage of coal. Power generation units commissioned after 2009 that have a cumulative capacity of 42,480 MW are currently getting only about two-thirds of their coal requirement from domestic mines. India has the world's fifth largest reserves of coal but is among the biggest three importers. The monsoon hasn't been too good either this year, and India's ports aren't exactly raring to handle a sudden rush of coal.

2.4 Land Acquisition Is A Mess

Land Acquisition poses an increasingly significant challenge in the Indian electricity sector. Power plants and utilities face major constraints and delays regarding the availability of land and obtaining the requisite environment and other clearances for the projects. The new Bill relating to land acquisition has continued to face political opposition. While it provides for acquisition by project development agencies to the extent of 70 percent of the land required for a project, with the balance to be obtained by the Government. In addition, it has been reported that in some cases, even after land owners were asked to sell and handover their land in 'Public Interest', the project was not completed for several years due to other delays, a fact that eroded the credibility of both the industry and the government. Consequently there is a significant mismatch of expectations from the Project Affected Persons (PAP). Stakeholders or other land owners may collectively object of the project execution. In such cases, it is essential to proactively manage the environment and stakeholders' expectations.
Another critical aspect which is not getting sufficient attention of policy makers is of bringing structural reforms on property registration which can be major contributor towards more transparent land deals and creation of healthy land markets. It involves action on setting right the in comprehensive, outdated and inaccurate land records. It also involves correcting the

situation of widespread lack of clear land titles. Land records and land titles in present shape and structure discourage any land acquirer in private sector to venture and acquire land on their own. Present act grossly falters in seeking consent of 80% of land owners by private acquirers themselves for any project before government steps in helping acquisition of land. If land records are not in place and land titles are not clear, proposition of identifying 80% of the land owners is itself misplaced. This single reason has the potential to derail any land acquisition process. Solutions obviously lie in updating land records, automating them and provide the data in public domain. Governments all over the country have made multiple half hearted attempts, yielding partial success. A lot of work is waiting government efforts on this area.

The process of generating secure land titles is another area to be addressed. There are two types of land registration processes – one being titles registration and other being the deed registration. Titles registration process provides single point land titling register and land title in a deal is not required to be proved or searched by either party. However the process is not available in India and onus of searching the land title along with risk of fraudulent transaction due to wrong title lies with the buyers. What we have in our country is mostly the deed registration. In deed registration process, the registrar of deed registration does no take nay responsibility of correctness of title and onus lies with the buyer, and that is where there is scope of fraudulent transactions. Again in this case the issue is in 'Work in Progress' state. Land titling bill is awaiting government nod.

These situations are further aggravated for any large ticket land transaction by the fact that land holding are very small. For an acquisition of 100 Hectares, a developer may need to seek consent from more than 100 families for satisfying 80% criterion. Till such time these issues are settled it is night mare for a private developer to venture and buy land for projects on their own, be it 80% or less or more.

The biggest unaddressed question is that whether we have a comprehensive long term National land management strategy in place. Is there any amount of consistency, clarity and predictability on account of land allocation strategy in various parts of country? Can industry or agrarian community plan their land use pattern based on long term government land use strategy? Most probable answer is "no". Almost no work has happened in the field of land markings across country identifying the target zones which shall be allowed to be used for different purposes. China had a clear policy identifying land use pattern for long term for locating SEZs across country and no wonder the SEZ story has been extremely successful there, unlike the one in our country. A nationwide scheme of identifying land patches available for different uses based on investments required and growth priorities of country can effectively provide development indicators to the interest groups. Such land patches can be placed on district wise e –governance portals for open information. The investment strategies would itself get aligned to such uses of land and different type of land areas would discover the real worth based on open bidding.

2.5 Environment Clearance Is A Priority

India's infrastructure sector has been in the doldrums for quite some time now because of huge delays in infrastructure projects effected due the attempt of the Government in attaining a sustainable development through the cogent process of Environmental Clearance. Environmental clearance process has emerged as one of the critical pain areas impeding the infrastructural growth in India. The problem of balancing the environmental concerns with the needs of the growing economy and expanding population has thwarted infrastructural developments in the country for quite a few years now. The Planning Commission has set an investment target of $1 trillion for infrastructure during the 12th Plan (2012- 17) but it is unlikely to be met unless the government addresseses the concerns of the sector. The Government needs to adopt a fresh approach to infra development in the country. It is extremely saddening that most of the crucial infrastructure projects in sectors like mining, national highway, thermal power, SEZ, cement industry etc. have been unnecessarily and immensely delayed due to the process of environmental clearance.

Delayed projects include crucial sixteen major highway projects within four states including the Chennai Port-Maduravoyal road in Tamil Nadu, Bahrampore-Farakka and Krishnanagar-Bahrampore projects in West Bengal, Cherthalai -Ochira and Thiruvanthapuram (Kerala)/Tamil Nadu border projects in Kerala and Goa/Karnataka border-Panaji in Goa which are awaiting environmental clearances from the Ministry of Environment and Forests (MoEF). As on 29.8.2012, 20 power projects were awaiting Environmental Clearance as per the Ministry of Environment and Forest and approximately 229 coal projects are awaiting Environmental Clearance. One might wonder what the real issue is! Whether is it the Environmental Clearance process itself or merely the procedures? In my understanding it is the latter. The Environmental Clearance process in itself is infact extremely essential to foster sustainable development as this process enables the concerned authorities in choosing whether or not an activity should be undertaken or not. It acts as a mechanism for screening the projects on the basis of the potential impact on the environment and the immediate social surroundings and is an attempt to abate it. The Environmental Clearance process consists of a chain of steps ranging from screening whether the project requires an environmental clearance or not; to identifying the potential impact of the project; followed by a public consultation to a recommendation by the Expert Appraisal Committee to the Ministry of Environment and Forests. Even though the Environmental Clearance process in various sectors had been evolved in consonance with the principle of sustainable development it has become the prime impediment in the process of development itself. The most crucial issue in the process of environment clearance that comes in the way of implementation of project is the lengthy process of the Environmental Clearance. In general, a minimum of approximately 10- 12 months is the timeframe that project proponents face to only obtain an Environmental Clearance. This time frame is more often than not stretched due to mere procedural delays.

Apart from this, all the government departments dealing with environmental regulatory issues for example pollution control boards, ministries of forest and environment, both at the centre as well as the state level have not been given sufficient man power to deal with growing number of appraisal and compliance regulations. It is high time that more people are recruited and engaged for appraisals, monitoring and compliance verification to fast track the environment regulatory process. In this context, it has been suggested that a singular body that will grant approvals for large infrastructure projects shall be constituted. News reports suggest that the government is considering forming a National Investment Approval Board (NIAB). The NIAB will be responsible for expediting the clearances for mega project proposals above a certain

financial threshold. The Board would be headed by the Prime Minister and will have the authority to provide the 'final decision' on investment projects. According to news reports, the NIAB will be the final decision making body.

Moreover, there should be co-ordination between Government agencies. Currently infrastructural projects require several clearances to be set up and be operative. The process currently takes substantial time and costs. To resolve this issue, a single window clearance system should be implemented with specific guidelines for time bound approvals. It should take a lead in packaging a full project with completed land acquisition and all environmental clearances, purchase contracts, etc before bidding it out. Else the whole system will eventually collapse.

2.6 Shortage Of Manpower

The biggest challenge facing the power sector in the State is shortage of highly-skilled manpower. There is a need for skill development training, and industries' help is needed for it, said Energy Department Secretary Hemant Sharma at a Confederation of Indian Industry's (CII) Energy Conclave on 'Emerging Power Sector and Priorities for Odisha' here on Thursday.

Sharma said though there is no shortage of infrastructure and funds, skilled manpower like fitters and technicians are not available for projects. There is a huge need for skilled manpower and the Government would provide all facilities to get trained and skilled personnel. The State has provided huge funds to develop massive infrastructure so that the initiative of '24x7 Power for All in Odisha is achieved.

He further said now the power distribution companies can have access to Government funds for different projects. While some years ago there were 13 lakh consumers in the State now it has reached 65 lakh. Energy deficits are non- existent and the State has made a transition from shortage regime to surplus regime. Besides, the private sector involvement in thermal and solar power has improved the situation. Now, shortages are thing of the past and surplus power is a reality.

However, by and large electricity is affordable in Odisha as the State Government has made huge investments. But on subsidies, he said path of revenue subsidies is a black hone and if one gets sucked in, one cannot get out it. So, the Government is making huge investments to make power affordable, he said. Talking about renewable energy, he said presently there is an energy mix and there is requirement for it. But renewable energy should be affordable for the consumer.

Power is an infinite need and it would grow further. But to generate it, one is dependent on finite need like coal, which one does not know till when it would be available. So sustainability of resources is important, said Sharma.

Nalco Director Production V Balasubramanyam said India has one per cent of oil reserves but 16 per cent of the world population. So it is a big challenge. Renewable energy would save energy and environment. But there is need for less consumption and more conservation of energy. Nalco is presently consuming 900 MW of power and with expansion of its projects it requirement would increase further.

The infrastructure in India is falling short of skilled manpower by about 40 per cent from the existing number of employed in this sector, revealed N Sivaraman, President and Whole-

time Director of L&T Finance Holdings while addressing the aspirants of career in infrastructure sector at SAMVIT School of Infrastructure Business on Saturday.
Sivaraman and Ashutosh Bishnoi (Advisor to L&T Finance) were speaking during a seminar, organized by SAMVIT to create awareness on the prospects in the booming infrastructure sector. He stated that the annual demand for civil engineers is 4.27 million against the current supply of only 27,000. Moreover, the shortfall of civil engineers in this decade (2010-2020) is expected to be 39.4 million.
Echoing the same concerns, Dr. Arun Mudbidri (Founder & Principal Director of SAMVIT) said, "The 'real' sector has not been the hallmark of MBA schools. MBAs have focused on soft manufacturing industry such as FMCG and Consumer durables. Following the services sector concentration, consumer services have been a focus area for the B-schools which include financial, banking, retail, consulting, telecom, InfoTech etc. Hence, there is a need to develop a dedicated education stream other than civil engineering and architecture colleges for the infrastructure industry."
Bishnoi further informed that around 1.2 million people are engaged in the infrastructure activities. Moreover, about 30 million are into labour works. When 58.3 million people are expected to be into the employment in infrastructure sector by 2020, there will still be a shortfall of 3.64 million architects and 1.1 million managers and planners during the same period.
"Infrastructure companies have been training the manpower at their own as there are not many infrastructure oriented management schools are not available in India. There is certainly a need for talent which is looking for lucrative options in terms of career, profile and remunerations. Infrastructure sector is the ideal one for such young aspirants and we need more schools like SAMVIT in the country to nurture the talent," Mr. Sivaraman said.

2.7 Scarcity In Supply For Power Project Equipments

Power plant equipment supplier, BGR Energy System has said it bagged orders for supply of steam turbine and generators from state owned NTPC for the proposed 2X800 MW super thermal power project at Lara in Chattisgarh. The value of the order is Rs 1548 crore. "The Lara bid was opening on September 15, 2011. BGR emerged as the lowest bidder competing against BHEL, L&T and Toshiba. The issue of notification of award (NoA) was delayed due to land acquisition and environmental clearances. The work on the project should be completed in 44 and 48 months time," BG Raghupathy, CMD of BGR energy said. The company has also emerged as the lowest bidder for NTPC's Darlipali project in Orissa. The value of this contract is around Rs 1500 crore

BGR is also setting up a power plant equipment factory near Madurantakam, near Chennai. The work on the factory, for which the company has signed a MoU with the Tamil Nadu state government, will begin in April and the first phase would be commissioned in 14 months thereof. The total investment in the manufacturing plant, which is coming up in JV with Hitachi of Japan, is Rs 3000 crore of which 30% is equity and the rest through debt, Raghupathy said. Of the Rs 3000 crore, two thirds would be turbine manufacturing while Rs 1000 crore would be for making boilers.

Power companies have cancelled about Rs 6,000-crore equipment orders in the past few months, leaving domestic equipment suppliers in distress as very few contracts have been awarded in the current fiscal. The power sector is in trouble because of fuel scarcity, sluggish approvals and lack of distribution reforms. The sector's distress has affected equipment

suppliers, who have seen orders worth only Rs 9,465 crore in the past 10 months, which is meagre by industry standards. In the previous fiscal, state-run monopoly BHEL alone booked 8,921 MW orders worth Rs 36,000 crore during April-December, including orders worth Rs 7,877 crore in a single quarter. Advances from customers for companies like BHEL and L&T have declined while receivables and working capital have soared. The two companies, however, have sizeable order backlogs. For new electrical equipment companies, capacity is lying idle, making it difficult to recover capital and costs.

Industry sources said L&T, Ansaldo Caldaie India,Cethar Vessels and Kalyani Alstom Power Ltd have not bagged any significant power equipment contract so far in the fiscal. Thermax India Managing Director MS Unnikrishnan told ET that his company would wait for 6-9 months for the market to pick up before booking orders. "But the wait cannot be long as the fixed costs have to be recovered," he said.

Electrical equipment association IEEMA President Ramesha Chandak said manufacturing facilities of electrical equipment like transformers, transmission lines, switchgears, conductors and cables are producing about half of their capacities. The growth of the industry, consisting mainly small and medium companies, slowed to 4% this fiscal against 14% till last year. Crompton Greaves Vice-President (power systems-Asia) JG Kulkarni said the transmission electrical equipment industry was witnessing shifting of deliveries due to uncertainty at project sites.

Equipment tenders for at least 20 power projects with about 34,000-mw generating capacity are stuck for the last 18 months due to uncertainties of fuel, environment clearances and land and water availability. Going by industry estimate of Rs 6 crore per megawatt cost, the projects would require over Rs 2,00,000 crore of investment."Roughly Rs 5,847 crore is the size of orders where there is a cancellation or change in the scope... Some of these projects have not started at all because of lack of coal linkage. Also there are sub-critical sets. Most of the customers are changing from sub-critical to super-critical and that is why they are cancelling these sub-critical orders and may go for super-critical later. And with the current environment, they are not able to finance the new projects yet. There are one or two customers who have cancelled," says BHEL Chairman and Managing Director BP Rao. L&T, Bharat Forge, Toshiba, Ansaldo Caldaie India, BGR Energy, Cethar Vessels and Thermax India are expected to put together equipment production capacity of about 20,000 MW per annum by 2014-15 against 20,000 MW annual capacity of BHEL. Domestic power equipment companies, including BHEL and L&T, have already expressed concern over Chinese imports flooding the Indian market.

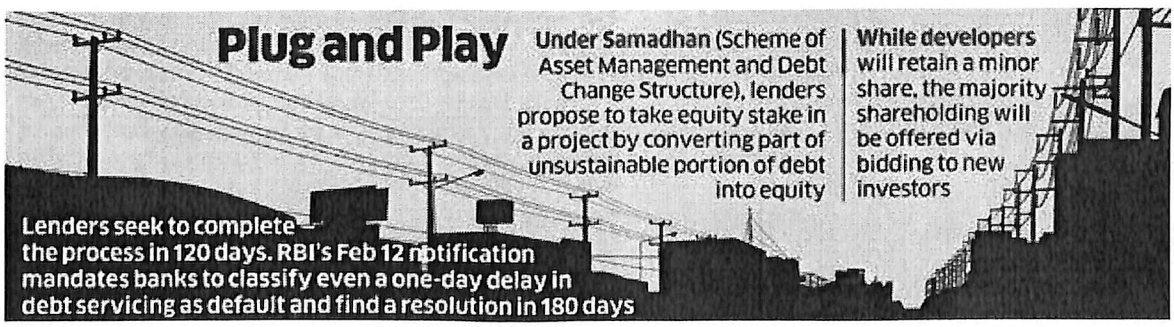
CHAPTER-3
CONCEPTUALISATION TO IMPROVE THE POWER SECTOR CONDITION

3.1 Samadhan Scheme

Power Finance Corporation (PFC) is working with the country's biggest lender, State Bank of India (SBI), and others to resolve 11 stressed power projects among other resolution plans. The state-owned power financier today said that under the SBI Samadhan Scheme, they are working out to bifurcate the good projects backed by the government's power purchase agreements (PPAs) to be taken over by a new power developer or company.

"Under the scheme, we are working with the bank to resolve 11 power projects which are NPAs, of which we are the lead lenders in four projects. SBI will appoint two rating agencies (Crisil and India Ratings). They will give ratings and find out what will be the sustainable and unsustainable debt," said Rajeev Sharma, Chairman and Managing Director of PFC.

Of the unsustainable debt, the lenders will select a new developer (mostly government-owned, like NTPC Ltd), who will get 51 percent equity while the remaining 49 percent equity will be distributed between the present developer and lenders, he added.



Although he did not clearly mention the total quantum of the 11 projects, a senior SBI executive last week informed that banks will soon come out with a plan to resolve Rs 70,000 crore worth of non-performing assets (NPAs) in the power sector through operation and maintenance (O&M) contracts.

Stressed assets to the tune of over Rs 1.8 lakh crore in the power sector have been a cause of concern for most lenders.

As per the SBI Samadhan Scheme, the lenders will get maximum portion of the unsustainable portion and the sustainable portion will be selected based on their availability of the PPA and other features of the project which will provide a good value, he added.

About Rs 23,000 crore are NPAs because of Reserve Bank of India (RBI) norms and Rs 36,000 crore, which were declared restructured, of which 90 percent have been reversed in FY18 and 10 percent will be reversed to standard accounts this year.

At a time when over 40,000 MW of power plants are already unviable for want of fuel or PPAs, on February 12 this year, the RBI abolished half a dozen loan-restructuring mechanisms and set out a new framework with a stringent 180-day timeframe for banks to agree on a resolution plan in case of a default. Failing that, they will have to initiate insolvency proceedings against the defaulter.

This substantially increased NPAs for most lenders, including PFC.For PFC, of the total Rs 2.79 lakh crore of loans as on March-end 2018, net NPAs are at 7.3 percent or about Rs 19,200 crore are government-related projects while 1.6 percent are private sector power projects.

"We are trying to resolve the projects, helping the government project NPAs to reduce from Rs 19,200 crore to Rs 12,000 crore and further down to Rs 7,200 crore," Sharma said.

According to Sharma, there are various ongoing resolution plans both through and outside the insolvency court, the National Company Law Tribunal (NCLT). "There are nine projects worth Rs 8,100 crore being resolved through the insolvency process while almost over Rs 30,000 crore outside of the insolvency process."

He added that apart from working with state governments such as Maharashtra and Uttar Pradesh to take over select power projects, PFC has also seen good expression of interest in assets outside of NCLT such as KSK Mahanadi project, Jhabua Power and Essar Mahan.

Among other projects, such as RKM Powergen and Rattan Amarvati are under restructuring, while a resolution plan is underway for Essar Transmission, India Power Haldia, RS India and Astonfield.

For now, PFC also plans to increase its financing to the renewable sector which has seen exposure at six percent, up from one percent previously and plans to increase this to 15-20 percent by 2020.

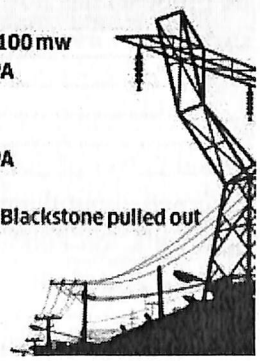
3.2 Some of the Big Names Who Are Facing A Finance Crunches

Lanco Infratech , Jaiprakash Associates and Avantha Group are among companies whose stressed power plants have been shortlisted by banks for acquisition by new promoters. A consortium of bankers led by the State Bank of India has shortlisted 11 such plants with a combined capacity of 12,640 megawatts.

These would be offered to new owners under SBI's Scheme of Asset Management and Debt Change Structure, or Samadhan, which proposes sale or takeover of the stressed assets to prevent their liquidation. The projects include Lanco Infratech's 1,200 mw Anpara project in Uttar Pradesh, Jaypee Power Ventures' 1,320 mw Nigrie project in Madhya Pradesh, the 2,400 mw KSK Mahanadi plant in Chhattisgarh, KSK Mahanadi Power, Jindal India Thermal Power, Ind Barath Power, and others.

In Search of Solution: The Chosen 11

Stressed Power plant	Capacity (mw)	Location	Lead lender	Status
Lanco Anpara Power	1200	UP	REC	Completed, PPA for 1100 mw
Jaypee Power Ventures- Nigrie	1320	MP	ICICI	Completed, partial PPA
KSK Mahanadi Power -Akaltara	2400	Chhattisgarh	PFC	Partially complete
Coastal Energen	1200	TN	SBI	Partial PPA/ FSA
Avantha Power (Jhabua)	600	MP	Axis	Completed, partial PPA
Jindal India Thermal Power	1200	Odisha	PNB	Part PPA/FSA
SKS Power Generation (Chhattisgarh)	600	Chhattisgarh	SBI	Cost overrun, PE firm Blackstone pulled out
Payagraj Power Gen (Jaypee Bara)	1980	UP	SBI	Full PPA
RKM Powergen (Ucchpinda)	1440	Chhattisgarh	PFC	Partial PPA
IND Bharat Utkal	700	Odisha	PFC	Partially complete
Ideal Energy	270	Maharashtra	Canara Bank	Complete



"Completed or near-completion power plants with partial or full power purchase agreements and locational advantage have been considered for the scheme. In the pilot phase, only 4-5 plants are likely to be taken up for testing," a source familiar with the development said. Promoters Won't Get More Than 24.5% While some companies could not be reached for comment, some said they were not authorized to speak on a sensitive matter that a consortium of lenders were handling. Stressed assets include those where deadlines for loan repayment have been breached and in some cases, debt restructuring has been undertaken. The main reasons for stress in power sector are lack of power purchase agreements,

The RBI's latest regulations on stressed assets provide resolution of these assets in 180 days after which they will face liquidation. If not resolved soon, these plants may go into liquidation in September. "The lead lenders of the projects have initiated talks with credit rating agencies such as Crisil NSE 0.42 % , ICRA NSE -0.72 % and Care to determine the sustainable and unsustainable portions of debt of each power project. The unsustainable portion of the debt will be converted into equity and the existing promoters will not be allowed to hold more than 24.5% in the project." the person quoted earlier said. Under Samadhan, lenders propose to take equity stake in a project by converting part of unsustainable portion of debt into equity.

While developers will get to retain a minor share, the majority shareholding will be offered through bidding to new investors. The lenders seek to complete the Samadhan process in 120 days. The RBI's notification on 'Resolution of Stressed Assets – Revised Framework' issued on February 12, mandates banks to classify even a oneday delay in debt servicing as default and find a resolution in 180 days.

After 180 days, the projects will have to be referred to the insolven- cy tribunal. Many of the power plants are likely to turn to NCLT in September. Meanwhile, the Allahabad High Court last week ruled that a power company can't be taken to bankruptcy court for not repaying loans unless it has been declared a wilful defaulter. It has also asked the finance secretary to meet power producers in June to discuss stressed assets, giving banks longer time to find a resolution to stressed accounts. The power ministry has also kicked off a scheme to aggregate power demand from states and call PPAs to relieve some of the stressed assets.

Power sector financiers Power Finance Corp had also mooted a proposal to float joint venture with companies like Rural Electrification Corp, NTPC and BHEL to acquire stressed assets.

The proposal has however been shelved due to lack of concurrence and stringent RBI rules. Currently, more than 75,000-mw generating assets, either operating or under construction are severely stressed due to various reasons like lower availability of coal, lack of power purchase agreements and delays in regulatory clearances. The government is reviewing 34 stressed thermal power projects with an estimated debt of about Rs 1.77 lakh crore. Experts are also concerned about the notification issued by RBI on 'Resolution of Stressed Assets – Revised Framework' on February 12 that mandates banks to classify even one-day delay in debt servicing as default.

Power minister RK Singh has already written to finance minister Arun Jaitley seeking amendment of RBI's circular dated February 12. Power secretary Ajay Bhalla has also written to RBI governor Urjit Patel. The power ministry is also trying to hold a meeting with Patel to discuss the concerns.

As per the revised framework, projects with interest or principal overdue starting from 1day to 30 days will be categorised as 'special mention accounts category -0' (SMO-0). The most stringent change in the framework is that all the lenders have to agree upon a resolution that has to be reached in 180 days.

3.3 Government Working On Similar Scheme Like SBI-Samadhan

Union Minister R K Singh today said Rural Electrification Corp is working on a scheme similar to what the SBI-led group of bankers came out with to takeover unsustainable debt of stressed power plants to avoid their liquidation.

The Rural Electrification Corporation(REC), which is under the administrative control of the power ministry, has drawn up a plan to turnaround assets of such stressed power plants, the power minister said. Under SAMADHAN (Scheme of Asset Management and Debt Change Structure, or Samadhan), the bankers' consortium shortlisted 11 power plants with an overall capacity of over 12 GW, which are either complete or nearing completion. This scheme is an effort to avoid liquidation of these plants at throwaway considerations. "State Bank of India and some banks have come together. They blew up a scheme called SAMADHAN. Under this scheme, they will try to revive some assets to run. They have selected 11 plants," Singh said at a press conference here. Elaborating further, he said, "The debt order will be reduced to a manageable level and converted into equities which are held by banks. That equity would be bid out to any players who want to buy those assets. That is how these assets would work."

"REC has also drawn up such a scheme in our ministry. We have mentioned this to the finance ministry. The attempt is that the assets which can be salvaged are salvaged. We don't want that these assets are sold for Rs 1 crore or 2 crore per MW (against investment of Rs 6 to 7 crore). We want to put in a mechanism to make these assets turnaround." Under the scheme, the bankers have identified 11 projects including Lanco Infratech's Anpara power plant, Jaypee Power Ventures' Nigrie power plant and KSK Mahanadi plant in Chhattisgarh. Under the SAMADHAN scheme, the bankers are addressing those assets which are either complete or near completion. The idea is to carry out an assessment what would be sustainable debt of these assets, and the remaining debt which is unsustainable would be converted into equity (to be held by the banks) -- 24.5 per cent to be allowed to remain with promoters. The bank can bid this equity to players who want to run these plants. The idea is that these plants will be run and not liquidated.

The minister said, "The REC scheme is also a variation of this. They will form an SPV which would hold this asset and run this asset till the situation improves." On RBI circular, the minister said that Allahabad High Court has stayed it and the finance ministry will call the meeting of stakeholders in June. Earlier last week, the Allahabad High Court had given a relief to stressed power projects which are facing threat of being pushed into insolvency proceedings. The Court had said that no action be taken against these projects under the Reserve Bank of India's (RBI) February 12 circular which mandates early detection and resolution of stressed assets till the finance ministry called a meeting of relevant stakeholders in June to see if the issues 7/14/2018 Stressed assets: Government working on Samadhan-like scheme for stressed power plants - The Economic Times The court's ruling is applicable to petitioners under Independent Power Producers' Association of India. The RBI circular curtails bankers' freedom

in dealing with stressed assets. The RBI's circular requires banks to finalise a resolution plan in case of a default on large accounts of Rs 2,000 crore and above within 180 days (irrespective of sectors), failing which insolvency proceedings will have to be invoked against the defaulter

3.4 Five Ways Government & RBI Trying To Speed Up NPA Recovery

The government is set to promulgate an Ordinance to help banks tackle the menace of mounting bad loans, which is denting profits of lenders, slowing credit flow to industry and hurting the economy.

The government is set to promulgate an Ordinance to help banks tackle the menace of mounting bad loans, which is denting profits of lenders, slowing credit flow to industry and hurting the economy.

The cabinet on Wednesday approved promulgation of an ordinance to amend the Banking Regulation Act to speed up recovery of bad loans.The move comes after clarion calls from lenders who have been jostling with stressed assets mounting to about Rs 10 lakh crore, or close to 7% of India's GDP, as of December-end.

Here are five ways the government and Reserve Bank of India can speed up recovery of non-performing assets (NPAs).

1. Amendment in banking law to give RBI more powers

The Banking Regulation Act may be amended to give RBI more powers to monitor bank accounts of big defaulters. The amendment in the banking law will enable setting up of a committee to oversee companies that have been the biggest defaulters of loans.RBI wants stricter rules for joint lenders' forum (JLF) and oversight committee (OC) to curb NPAs. While the present law allows the government to direct RBI to carry out inspection of a lender, there is no provision for setting up oversight committees. Also, there could be changes in the laws, which will bar a bank to extend loans to a defaulting company that has failed to repay to other banks.

2. Stringent NPA recovery rules

The government has over the years enacted and tweaked stringent rules to recover assets of defaulters. The Securitisation and Reconstruction of Financial Assets and Enforcement of Security Interest Act or Sarfaesi Act of 2002 was amended in 2016 as it took banks years to recover the assets. Experts have pointed out that the NPA problem has to be tackled before the time a company starts defaulting. This needs a risk assessment by the lenders and red-flagging the early signs of a possible default.

3. RBI's loan restructuring schemes

RBI has over the past few decades come up with a number of schemes such as corporate debt restructuring (CDR), formation of joint lenders' forum (JLF), flexible structuring for long-term project loans to infrastructure (or 5/25 Scheme), strategic debt restructuring (SDR) scheme and sustainable structuring of stressed assets (S4A) to check the menace of NPAs. In many cases, the companies have failed to make profits and defaulted even after their loans were restructured.

4. Present NPA scenario

According to the latest information collated by the government, stressed assets which includes both non-performing assets as well as restructured loans of banks stood at Rs 9.64 lakh crore as on December 31, 2016. In December, RBI's financial stability report said the gross non-performing advances (GNPAs) ratio of all banks increased to 9.1% by September 2016 from 7.8% in March 2016. The amount of stressed loans was up at 12.3% of total loan given out by banks by September, up from 11.5% in March 2016. RBI's stress test of the banking sector indicated that GNPA ratio may increase from 9.1% in September 2016 to 9.8% by March 2017, and further to 10.1% by March 2018. PSU banks are worst hit as their GNPA may increase to 12.5% by March 2017 and then to 12.9% in March 2018, from 11.8% in September 2016.

5. Banks may need to take a "hair cut"

In the past few quarters, most of the banks especially PSU lenders, have reported a sharp fall in profits as they set aside hefty amounts for losses on account of NPAs, which eroded their profits. Given the gravity of the problem, the government may ask banks to go for more "hair cut" or write offs for NPAs. The government and RBI may also come up with a one-time settlement scheme for top defaulters before initiating stringent steps against them. The finance ministry and RBI are also considering setting up of a "bad bank" to deal with the problem of non-performing loans, as it has been suggested by chief economic adviser Arvind Subramanian in the Economic Survey. Reserve Bank deputy governor Viral Acharya has also floated the twin concept of Private Asset Management Company (PAMC) and National Asset Management Company (NAMC) for resolution of stressed assets. With rule changes and strict regulations, banks may be asked to restructure about 50 large NPA accounts by December, 2017.

3.5 Government, RBI nudge banks to pursue onetime settlement to recover non-performing loans

One-time settlement of dues by defaulters may rise in the next few months as banks' aggressive move to recover loans and the Reserve Bank of India's push to make bankruptcy courts the central mechanism for recoveries could lead to some promoters losing their businesses. This would also ensure that banks don't clog the bankruptcy courts with cases where the default amount is not high. People familiar with the development said banks have begun aggressively negotiating one-time settlement (OTS) on the insistence of the finance ministry and the central bank, which want speedy clean-up of bank balance sheets. "Several cases where defaulters had proposed one-time settlement are being brought back to the table to improve recovery," said a banker. "We are also proposing this scheme to promoters who seem willing to pay up dues." Banks are taking this approach in both large and small value cases, the banker said on the condition of anonymity. RBI had recently reviewed the top 500 exposures of banks that are partly or wholly classified as non-performing assets (NPAs) and has given its

recommendations, which include referral of the top 12 NPAs for resolution under the Insolvency and Bankruptcy Code, 2016 (IBC). The regulator had recommended that for other large NPAs, banks should figure out a resolution within six months and if a viable resolution is not reached within six months, the banks must begin liquidation proceedings. "RBI has set us a deadline and we are taking all measures to improve recovery rates from defaulting accounts, including OTS," said another banker. "In the past OTS decisions would come under suspicion and hence decision making was slow, but we have been assured by authorities that this has to be pursued aggressively," the person said. ET had recently reported that banks were aggressively pursuing OTS to recover dues worth Rs 6,000 crore from telecom and technology company GTL Ltd. The Manoj Tirodkar promoted company had made a one-time settlement offer to lenders to repay 60 per cent of the outstanding debt, which amounts to about Rs 4,000 crore. 7/14/2018 non-performing loans: Government, RBI nudge banks to pursue one-time settlement to recover non-performing loans - The Economic Times https://economictimes.indiatimes.com/industry/banking/finance/banking/government-rbi-nudge-banks-to-pursue-one-time-settlement-to-recover-non-performing-loan... 2/2 A month back Paramount Communications NSE -2.49 % entered into a one-time settlement with Standard Chartered Bank for settlement of their entire outstanding dues. In April 2016 beleaguered liquor baron Vijay Mallya had offered to make a staggered payment of Rs 6,868 crore as onetime settlement, which was shot down by banks. "Taking a 40 paise loss on a rupee seems better with a one-time settlement than taking a subsequent haircut on loan," said the CEO of a leading private bank. "With a one-time settlement, the banker can be assured that he can recover at least 60 per cent of the loans rather than taking the risk of a long-term settlement where the chances of recovery will get narrower," the person said. "The behaviour and personality of borrowers are unlikely to change. There are sick companies, not sick promoters. As far as insolvency is concerned, banks will eventually have to provide for 100 per cent of the bad loans," the CEO said on condition of anonymity. Bank of India had recently said it would opt for one-time settlements of loans with errant borrowers as one of the key recovery strategies and this would be implemented in all borrower segments to avoid lengthy legal processes. In March this year, State Bank of India NSE -1.90 % had allowed one-time

settlements for tractor and farm equipment loans that made up about Rs 6,000 crore of doubtful and loss cases on its books. In 2015, SBI had opened a one-time settlement scheme for its retail, wholesale and small and medium enterprise (SME) borrowers, which led to bad loan recovery worth Rs 800-850 crore from the segment. Recently, SBI chairman Arundhati Bhattacharya had said that banks may not rush to resolve cases or recover dues via the insolvency code as the ecosystem required for the new law had not been fully created. In a sudden missive to banks on June 23, RBI demanded a steep increase in provisioning requirements for loans being referred to bankruptcy courts. The regulator also told banks to set aside at least 50 per cent of the loan amount as likely losses for all cases referred to the insolvency process. The regulator said provisioning should be 100 per cent in cases that don't get resolved and are forced into liquidation. In a communication on June 13, RBI had advised banks to initiate insolvency proceedings against 12 companies — Bhushan Steel NSE -4.81 % , which owes Rs 44,478 crore to lenders, Lanco Infra (Rs 44,365 crore), Essar Steel NSE 0.00 % (Rs 37,284 crore), Bhushan Power (Rs 37,248 crore), Alok Industries (Rs 22,075 crore), Amtek Auto NSE -1.16 % (Rs 14,075 crore), Monnet Ispat NSE -4.65 % (Rs 12,115 crore), Electrosteel Steels NSE 4.00 % (Rs 10,274 crore), Era Infra NSE -2.47 % (Rs 10,065 crore), Jypaee Infratech (Rs 9,635 crore), ABG Shipyard (Rs 6,953 crore), and Jyoti Structures (Rs 5,165 crore).

CHAPTER-4

ANALYSIS ON POWER SECTOR NPA

4.1 Introduction: Power sector NPAs are not a banking problem, Around 22% of India's installed power-generation capacity burdens Indian banks as non-performing assets (NPA). There is little scope of restructuring them through the Insolvency and Bankruptcy Code route, because the problem lies in bankrupt politics that makes state utilities incapable of buying power from generators and not with the generation projects per se. Unless the politics is reformed, buying into power generation will prove a dud investment. Therefore, the scheme the banks have come up with, of converting their debt into equity in the power assets and selling these on to patient capital, makes sense.

However, the banks' hope that the National Investment and Infrastructure Fund would come forward to willingly hold these assets might prove unrealistic. The banks should partner Power Finance Corporation or PTC India Financial Services to create the patient capital they need. The way forward is to follow through with power tariff reforms and mandate transparency in utility finances. Subventions that may be necessary to meet the ambitious target to supply power for all by December need to be specifically targeted and budgeted upfront. The Reserve Bank of Indiahas, rightly, refused to grant any special treatment for stressed power projects, and their resolution would be as per the RBI's 180-day timeline.

The Ujwal Discom Assurance Yojana (UDAY) scheme needs close monitoring, including quarterly publication of utility results. States have issued bonds worth .`2.32 lakh crore to take over their utilities' debt. But with giveaways, patronage of theft and populist giveaways par for the course, the whole UDAY scheme can well come to nought and at a huge national cost. Without reform in the power sector, lending to power cannot be redeemed.

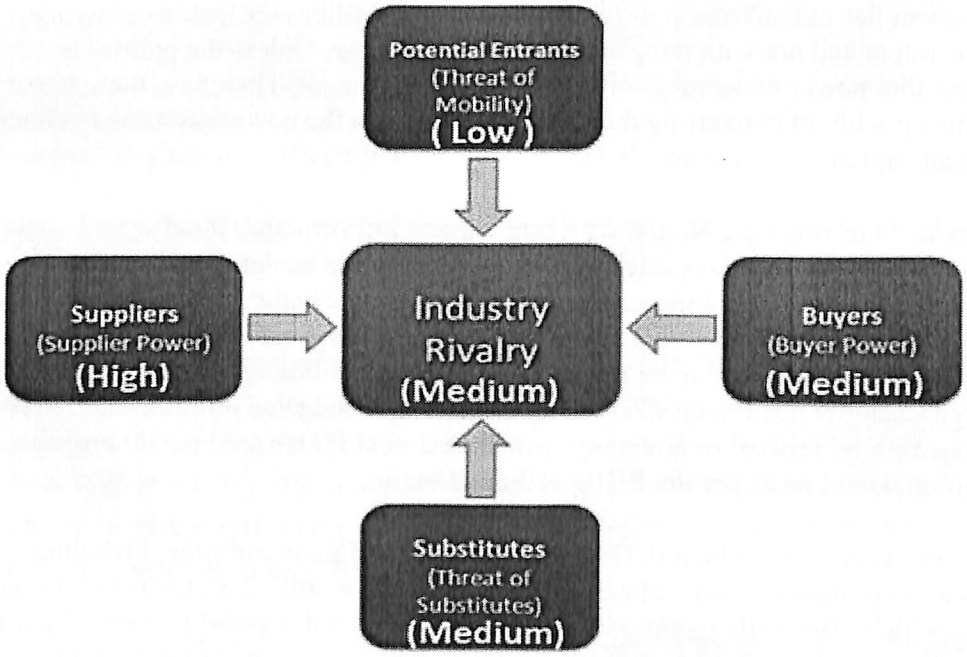
4.2 Main Fractional Analysis Of Stressed Power Sector:

The threat of the entry of new competitors

- Highly capital-intensive industry and hence demands huge investment
- Power producers – Behemoth like NTPC, SEBs contributing around 85 % of total power produced
- Ditto for Power Grid Corp. of India in Transmission and Distribution Segment
- Major plans by big companies like Reliance power, Adani power, Lanco etc. to make a entry into power sector after market opened up for private sector through Electricity Act 2003 and subsequent reforms
- However obtaining regulatory approvals,fuel linkages, land etc. still remain the major bottlenecks.
- Hence the threat of new entrant appears to be low

The threat of substitute products or services

- Power does not have substitute but it can be generated from different sources of energy.
- Currently thermal power is dominant in India, coal being the major raw material.
- Coal availability is limited and therefore power from nuclear, hydro and other renewable sources could be used as substitute for thermal power in future.
- Agreements with various countries for nuclear collaboration will give major impetus to Nuclear power plants
- Although demand for power outstrips its supply, going forward, thermal power plant companies have threat from non-thermal power generators.
- Hence the threat of substitute products is medium



The bargaining power of customers (buyers)

- Industrial consumers have huge demand for power
- Their bargaining power is low in India as the number of power companies to buy from is limited in number. Hence power companies are in better position.
- Retail customers -Government regulates the power sector to ensure supply of power at reasonable prices but this regulation is limited.
- Peak shortage is much more in every region and it is about 12 % on all India basis which allow suppliers to dictate terms with the buyers.
- Overall, the bargaining power of buyers is Medium.

The bargaining power of suppliers

- Coal is majorly used as a feed for generating power.
- The supply of coal in India is limited and hence coal players are in dominant position.
- Power companies are required to import coal if the domestic supply is not sufficient, which proves to be an expensive affair.

- With companies like Lanco, Adani Power buying coal mines in Indonesia, Australia etc. to import better grade coal than available in India, market dominance of Govt. Companies like Coal India will subside gradually.
- However looking at the present situation, the power of suppliers is high.

The intensity of competitive rivalry within the Industry

- Power producing companies – No competitive rivalry as demand for power is way above its supply and all the power generated is used up.
- However, with government encouragement, private participation is expected to increase in the coming years to take advantage of huge demand for power
- Power equipment market - Market leader like BHEL is facing tough competition from L&T, Alstom, Doosan and most importantly Chinese suppliers.
- Major orders of Boiler, Turbine and Generator grabbed by Chinese suppliers from most of the private sector clients.
- So overall the intensity of competitive rivalry is medium.

4.3 Banking Ordinance a bold step but silent on considering environmental and social risk management to reduce NPA

The Banking Regulation (Amendment) Ordinance, 2017,which was passed by the Honourable President Pranab Mukherjee, confers more power on the banking regulators in order to address the Non-performing Asset (NPA) crisis that seems to have worsened with the banks' bad loans rising to Rs 9.64 lakh crore."*The stressed assets in the banking system have reached unacceptably high levels and urgent measures are required for their resolution,*" reads the opening line of the Ordinance passed on May 4, 2017.

In order to reduce the growing NPAs, the Reserve Bank of India (RBI), in the past, had taken several initiatives like issuing master circular, framework, guidelines and notifications. And lastly, after signing the ordinance, notification titled "Timelines for Stressed Assets Resolution" for NPA management was released by the RBI on May 5, 2017.

Under the Ordinance, additional power given to the RBI would allow it to,

Issue directions to any banking company/companies to initiate insolvency resolution process in respect of a default, under the provisions of the Insolvency and Bankruptcy Code, 2016.

Issue directions to banking companies for resolution of the stressed assets from time to time, and Specify one or more authorities/committees to advise banking companies.

The measures employed by the RBI and the Ordinance suggest that focus is more on "fire-fighting"— reactive rather than proactive approaches. Although the Ordinance is a commendable and bold step for addressing the present NPA crisis, it is silent on how future NPA crisis can be prevented.

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In 2016, Raghuram Rajan, ex-Governor of RBI, while addressing the Public Accounts Committee, highlighted **some of the main reasons for the growing NPAs within the banking sector**. These include

1. Overall economic slowdown
2. Delays in statutory and other approvals for projects under implementation
3. Aggressive lending practices during upturn as evidenced from high corporate leverage
4. Laxity in credit risk appraisal, loan monitoring in banks
5. Lack of appraising skills for projects that need specialised skills, and
6. Wilful default, loan frauds and corruption

This scenario, despite being grim, gives an excellent opportunity to the banking regulators to make suitable reforms that would prevent occurrence of such scenarios in the future.

Three of the six causes highlighted above—delays in statutory and other approvals for projects under implementation, laxity in credit risk appraisal and loan monitoring in banks and lack of appraising skills— highlight the current gaps in existing appraisal and monitoring process of the banks as well as their lack of internal capacity.

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The published documents in the public domain reveal that delay in obtaining project-related statutory and other approvals is mainly due to inadequate project planning, poor assessment, concealing critical issues and land-related conflicts originating from inadequate compensation, Resettlement and Rehabilitation (R&R) benefits and ownership rights settlement. Another main reason for delays in approval is violation of procedures as mandated under the statute.

One of the gaps in the existing project loan appraisal process is the lack of consideration given to environmental and social (E&S) risks prior to financing.

Although there is no absolute figure of NPAs due to E&S issues (like land, biodiversity, forest and environment), there has been a long list of developmental projects that have faced serious setbacks due to judicial intervention, non-compliance and people's protest and conflicts. Looking at the major sectors which have the maximum number of stressed assets, we see that Iron and Steel, Power, Textile and other infrastructure projects have the major share.

Some of the examples summarised in the box below highlight that even after obtaining the required clearances and permits, how projects faced setbacks due to E&S issues.

PROJECTS AFFECTED DUE TO ENVIRONMENTAL & SOCIAL CONFLICTS						
S. NO	**Project**	**Project Cost (in Rupee Crore)**	**Environmental Clearance Granted & Date**	**Delay in Years**	**Reasons for delay**	**Current Status**
1.	Gare Palma Sub Block IV/6 Coal Mining Project, Raipur, Chhattisgarh	479	Yes (May 18, 2009)	6	• Procedural violation in public hearing, • Land conflict • Poor environmental assessment	Suspended
2.	East Coast Energy Thermal	6,570 (which increased	Yes (April 9,	4	• Construction activities started	Under construction

	Power Plant, Kakarapalli , Andhra Pradesh	to Rs 9,443)	2009)		prior to granting of EC • Procedural violation • Poor environmental assessment • Failure to address impacts on biodiversity, wetland and people's livelihood	
3.	Nagarjuna Thermal Power Plant, Sompeta, Andhra Pradesh	12,000	Yes (December 9, 2009)	8	• Impact on water body and biodiversity • Loss of livelihood, • Poor environmental assessment and procedural	Scrapped

					violation.	
4.	Nirma Cement Plant, Gujarat	894	Yes (December 11, 2008)	7	• Serious impacts on the water body and local groundwater hydrology • Gaps in environmental impact assessment	Under construction
5.	Coastal Andhra Power Limited Ultra Mega Power Project, Andhra Pradesh	17,400	Yes (October 23, 2007)	10	• Land acquisition issues • Inadequate assessment of fuel linkages	Yet to begin construction
6.	Athena Damwe Hydroelectric Power Project, Arunachal	13,145	Yes (February 12, 2010)	5	• Poor environmental assessment • Impact on	Under construction

	Pradesh				livelihood and biodiversity	
7.	Lavasa Hill City Project, Maharashtra	30,000 cr[1]	Yes (November 9, 2011)	6 (Phase I)	• Procedural violation • Land-related conflict • Impact on livelihood	Phase I yet to be completed
8.	Dhamra Port Project, Bhadrak, Odisha	3,200	Yes (April 1, 2000)	8 (Phase I)	• Impact on biodiversity, especially marine ecosystem, • Procedural violation, • Poor environmental assessment	Currently operational
9.	Vedanta Bauxite Mining Project, Odisha	4,000	Yes (September 22, 2004)	10	• Impact on endemic tribe (Dongria Kondh tribe) and biodiversit	Scrapped

					y • Procedural violation • Poor environmental assessment	
10.	Kalinganagar Steel Project, Odisha	10,000	Yes (November 7, 2006)	8	• Land acquisition and livelihood issues	Currently operational
11.	Bhairongha ti Hydro Power Project, Uttarakhand	296.82	No	2	• Inadequate compensation • Biodiversity impacts • Inadequate public consultation, • Gaps in the EIA	Scrapped
12.	Jindal's Tamnar Thermal Power Plant, Chhattisgarh	13,410 [2]	Yes (March 18, 2011)	6	• Impact on endemic tribe and biodiversity • Procedural violation in public	Currently operational

					hearing	
13.	Loharinag Pala Hydro Project, Uttarakhand	2,895.1 [3]	Yes (February 8, 2005)	NA	• Impact on environment, especially on riverine ecosystem, • Cultural impacts	Scrapped in 2010
14.	Posco Steel Plant, Odisha	52, 810	Yes (January 7, 2014)	7	• Land acquisition and livelihood issues • Procedural violation	Scrapped

CSE recommendations to minimise bad loan scenario due to Environmental & Social issues

From the above examples, the importance of E&S risk management as part of the credit risk appraisal process can't be undermined. With the current bad loan scenario reaching an all-time high, the Centre for Science and Environment would like to recommend some measures to the RBI and banking regulators to minimise the reoccurrence of such scenario in the future.

1. Mandating E&S risk management for internal credit risk appraisal process
2. Develop standard guidelines to be followed by all banks and financial institutions
3. Capacity building of the banking staff
4. Mandating transparency and accountability in project financing for both banks as well as the borrowers.

Chapter-5

RECOMMENDATIONS AND CONCLUSIONS

5.1 Some Close Shot to resolve NPAs in power sector

Union Power Minister Piyush Goyal today said that the government is close to resolving some cases of stressed power projects where the promoters in question are not wilful defaulters on loans they have raised.

"We are close to resolution of stressed thermal power projects soon where developers are not wilful defaulters," Goyal said in response to a query at a briefing here on three years of the NDA government.

"We have been actively engaged with the various stakehoders ... state discoms, bankers ... to resolve the NPAs (non-performing assets) of the power sector and I am assuring the nation that this will result in a further benefit to consumers through discoms being able to provide cheaper tariff," he added.

The power sector accounts for part of the overall problem of NPAs, or bad loans, affecting the Indian banking sector. NPAs of state-run banks at the end of last September rose to Rs 6.3 lakh crore (almost USD 100 billion), as compared to Rs 5.5 lakh crore at the end of June 2016.

The Power Minister said that his ministry is making various efforts to revive stalled and stressed thermal and hydro power projects.

Regarding stressed hydroelectric projects, Goyal said he has been requesting states to take over the debts of such projects as part of a joint Centre-state initiative to revive these.
According to officials, 100 gigawatt (GW) of 'stranded and stressed assets' have been revived through policy reforms and resource mobilisation.

Under Uday, a state government agrees to take over 75 per cent debt of its distribution company. The scheme provides for the balance debt to be re-priced or issued as state guaranteed discom bonds at coupon rates around 3-4 per cent less than the average existing interest rate.

The signatory state gets additional benefits by way of cheaper funds, reduction in aggregate technical and commercial (AT&C) and transmission losses and interventions in energy efficiency during the period of turnaround.

Goyal, who is also minister for coal, said the country now has surplus of both coal and power, while there has been no rise in coal prices for the last three years.

However, India continues to import coal, he said, because the "myopic policies of previous governments" had led to the creation of 83,100 MW of power capacity "through plants that depend solely, or largely, on imported coal".

"Although, we are otherwise self-sufficient in coal," Goyal, who also holds the mines portfolio, added.

Besides, as also the Minister for New and Renewable Energy, Goyal said that India has seen a 370 per cent growth in renewable-based generation capacity in the past three years. He expected renewable energy capacity to surpass thermal power by 2022.

5.2 Three ways to minimize power sector NPAs

The villains in the power sector's tale of woes haven't changed in a while: worsening asset quality and rising non-performing assets (NPAs).

Around 51 gigawatt (GW) of thermal capacity is stressed because of the non-availability of coal, lack of assured offtake, and huge under-recoveries due to disallowance on account of various factors. A further around 23 GW of capacity under construction is also potentially stressed.

That's tantamount to around Rs4 trillion of debt under stress—and potential NPAs.

The gloom is despite the government's and the Reserve Bank of India's moves to ease the pressure on banks through strategic debt restructuring, which offers banks equity in lieu of stressed assets, and the scheme for sustainable structuring of stressed assets (S4A), which affords financial restructuring by allowing lenders to acquire equity.

While these schemes provide limited relief to banks by changing the capital structure and postponing the problem of poor potential cash flows, there is a lack of offtake and lack of power purchase agreements (PPAs) and availability of coal.

The offtake issue first: Discoms have shied off power purchase agreements (PPAs)—the last one was in 2016 in Uttar Pradesh for 3,800 megawatt power, only to be cancelled later. They have preferred to buy power through short-term contracts or the open market, given subdued offtake and prices, and significant capacity addition in the past five years.

Consequently, many generators have been selling electricity at throwaway prices or have switched off plants, leading to defaults on financial covenants. And with the increasing thrust on renewable energy and clean energy, the procurement of thermal power has tapered.

The perceived surplus—of generation outpacing demand—is a chimera because on the other side you have load-shedding by discoms. The truth is, discoms aren't buying enough because of poor financials, and not because demand is low.

Besides, the 'lack of demand' theory does not gel with initiatives such as the Saubhagya scheme and 24x7 power-for-all, and the fact that the per capita electricity consumption in India is just a third of the world's average.

Of late, with hours of supply increasing and coal shortage, spot prices have surged, with average tariff touching Rs4.09 per unit in September 2017. But this over-dependence on the short-term market is a short-sighted approach.

Now to coal supply: The absence of fresh coal linkages (none since 2010), restrictions on the use of linkage fuel, and cancellation of coal mines without alternative arrangements have hit thermal plants. Another fell blow—for private sector producers this time—is the rider that only long-term PPA holders can get linkage.

And the response to the past five rounds of coal auctions has been tepid, with the last one (or Tranche V) even getting cancelled. Of the 72 coal blocks auctioned and allotted so far, only a handful have started operations. Many cases have been filed in courts on the auction method, the compensation to be paid to prior allottees, and the modification of auction rules after bidding.

But the scheme for harnessing and allocating koyla (coal) transparently in India, or SHAKTI, under which the government is to provide coal linkage to developers, was successful, with a total booking of around 27.18 million tonnes of coal per annum from eight available sources. This was, however, a limited scheme and will need to be extended. The larger point is that Coal India Ltd will not be able to meet this requirement till at least 2020 even if thermal power plants run at 55% plant load factor.

In the context, three steps can help the stranded capacities from becoming NPAs.

First, stricter regulations are necessary to discourage load-shedding by discoms and to ensure quality, universal power supply to meet the 24x7 goal. This will help capture the actual demand and force discoms into competitive bidding to buy power.

Second, the issue of non-signing of PPAs by discoms can be solved through centralized procurement and allocation of capacity to states—as has been done in renewables. The concern among discoms of long-term fixed-cost liability can be overcome by sharing the risk and rewards. For instance, it could be a single-part tariff with a discom committing to procure at least 60% of the power. Where power is not bought, it could be sold in the open and the difference then borne by discoms. Similarly, if the price is high on the exchange, the upside could be shared with discoms.

Besides, PPAs can be for the medium rather than the long term, where both suppliers and discoms have the choice to review tariffs and conditions after three-five years. By then, the market may be more stable in terms of price discovery, owing to economic recovery, increased per capita power consumption, impact of electric vehicles, and infusion of more renewable energy into the grid.

Third, along with centralized procurement, the government should consider a SHAKTI scheme (second round) for constructed plants without fuel linkage so that they, too, can actively participate given the comfort of fuel source.

This centralized scheme could be extended to imported coal stations as well as hydro stations.

These steps can help minimize NPAs and haircut levels for banks, and also provide a signal to new investors who haven't put money into the conventional power sector for more than three years.

5.3 Conclusion The Only Way Out:

The growth in renewable generation capacity will definitely put pressure on conventional power generation. As the Thermal Power Generating companies are under huge financial stress, lenders have already taken the control on assets and failed to sell the stake due to lack of optimism in the power industry. It may be not possible to revive these stressed assets in next 1-2 years unless there is a firm fuel availability and especially signing of long term PPA's with the Discom's. However, revival of these assets is not possible merely based on Fuel availability (or) restructuring of equities, but the demand growth rate shall also be ensured to have the PPA's.

New Environment norms for emissions & Constraints of Generating companies

Ministry of Environment, Forest and Climate Change (MOEF) vide notification dated 7th December 2015 revised the standards (stricter) for emissions (SOx,NOx and Particulate matter, water consumption) from the Power Plants/Industries to ensure the reduction of emissions by Dec 2017. Initially, given 2 years time to reduce the current emissions and however it has been extended another five years (up to Dec 2022) for compliance of revised norms. As per the study, 90% of the coal based power plants in India (about 160GW Capacity) are in violation of emission norms notified by the Hon'ble MOEF. Now, the major constraint of the power generators is to install Flue Gas Desulphurisation (FGD) and Selective Catalytic Reducer (SCR), Fabric Filters (FF)..etc in line with the revised norms (to offset the emissions) as a anti-pollution equipment. It is estimated that Rs 1 cr/MW (approx) is the installation cost (or retrofit cost) of this equipment and also space availability at existing power plants has become main area of concern. Because of this huge capital investment, raise of Tariff rate (by Rs 0.3/ - Rs 0.6 per unit kwh approx) will be overburdened on customers and also, the viability of the power plants which are operating without any power purchase agreements is questioned.

And also, around 20GW (out of 160GW capacity indicated above)power plants doesn't have any space to install FGD's/required equipment's to ensure revised emission levels. It is being considered to retire these power plants, however the decision is still pending at Central Electricity Authority.

As per the Draft National Electricity Plan (2016), no new coal based power capacity is needed after 2022 excluding 50GW of existing power projects which are under various stages of construction (or) ready for commissioning /awaiting for fuel availability/allocations. It is expected to add this 50GW capacity during the 13th Five year plan (2017–22). Due to uncertainty of gas availability, no new gas based power plants are also envisaged in India. To ensure the emissions target in line with the terms of paris agreement, it is mandate to adopt new emission standards and no option to power generators to make any excuses. But, the Govt of India should support power generators financially (example : by subsidizing the anti-pollution equipment's such as FGD's, SCR's, FF's..etc) and also allowing to recover this Capex investment in the tariff without comparing the tariff's of the renewable sources which are available at comparably lesser tariff's at grid. Since, no new thermal power plants are envisaged in the next 5 years, the survival of the existing thermal power plants (especially private generators) is possible only with the support of Govt's (State & Central), Regulatory authorities technically and financially without which significant reduction of emissions is not merely possible.

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