

**A PROJECT REPORT**  
**ON**  
**“Funds Flow Statement”**  
**With Reference To**  
**Genting Lanco Power (India) Private Limited**  
**Vijayawada**

**In Partial Fulfillment of the Requirement**  
**For The Award of the Degree In**

**MASTER OF BUSINESS ADMINISTRATION**  
**(MBA)**

**Submitted By**  
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**Under the Guidance of**  
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**D.V.R.POST GRADUATION INSTITUTE OF MANAGEMENT STUDIES**

**July 2005 – May2007**

## **CERTIFICATE**

This is to certify that Mr. V.RUKMANGADA RAO of D.V.R POST GRADUATION INSTITUTE OF MANAGEMENT STUDIES has Successfully completed the project work titled “EVALUATION OF FINANCIAL PERFORMANCE” in partial fulfillment of requirement for the award of (POST GRADUATE MANAGEMENT PROGRAM) prescribed by the D.V.R PG INSTITUTE OF MANAGEMENT STUDIES.

This project is the record of authentic work carried out during the academic year (2005 – 2006).

**Prof.Mrs. Anjali Vamburkar**

Internal Project Guide

**Prof. (Gp Capt) D.P.APTE**

Associate Director

## **DECLARATION**

**I, Mr.\_\_\_\_\_ hereby declare that this project is the record of authentic work carried out by me during the academic year 2005– 2007 and has not been submitted to any other University or Institute towards the award of any degree.**

**Signature of the student**

## **ACKNOWLEDGEMENT**

I am very much obliged and indebted to **Mr. S Anand**, General Manager of Genting Lanco Power (India) Private Limited for his approval and valuable suggestions to take up the project.

I also extend my gratitude to **Mr. R Srinivasa Rao**, Manager (Finance & Accounts) for his approval and valuable suggestions to take up the project in Genting Lanco Power (India) Private Limited.

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## *Chapter – 1*

# **INTRODUCTION**

## **Introduction**

**Financial Management** is the specific area of finance dealing with the financial decision corporations make, and the tools and analysis used to make the decisions. The discipline as a whole may be divided between long-term and short-term decisions and techniques. Both share the same goal of enhancing firm value by ensuring that return on capital exceeds cost of capital, without taking excessive financial risks.

*Capital investment decisions* comprise the long-term choices about which projects receive investment, whether to finance that investment with equity or debt, and when or whether to pay dividends to shareholders. Short-term corporate finance decisions are called *working capital management* and deal with balance of current assets and current liabilities by managing cash, inventories, and short-term borrowings and lending (e.g., the credit terms extended to customers).

Corporate finance is closely related to managerial finance, which is slightly broader in scope, describing the financial techniques available to all forms of business enterprise, corporate or not.

## **Role of Financial Managers:**

The role of a financial manager can be discussed under the following heads:

1. Nature of work
2. Working conditions
3. Employment
4. Training, Other qualifications and Advancement
5. Job outlook
6. Earnings
7. Related occupations

Let us discuss each of these in a detailed manner.

### **1. Nature of work**

Almost every firm, government agency and organization has one or more financial managers who oversee the preparation of financial reports, direct investment activities, and implement cash management strategies. As computers are increasingly used to record and organize data, many financial managers are spending more time developing strategies and implementing the long-term goals of their organization.

The duties of financial managers vary with their specific titles, which include controller, treasurer or finance officer, credit manager, cash manager, and risk and insurance manager. ***Controllers*** direct the preparation of financial reports that summarize and forecast the organization's financial position, such as income statements, balance sheets, and analyses of future earnings or expenses. Regulatory authorities also in charge of preparing special reports require controllers. Often, controllers oversee the accounting, audit, and budget departments. ***Treasurers and finance officers*** direct the organization's financial goals, objectives, and budgets. They oversee the investment of funds and manage associated risks, supervise cash management activities, execute capital-raising strategies to support a firm's expansion, and deal with mergers and acquisitions. ***Credit managers*** oversee the firm's issuance of credit. They establish credit-rating criteria, determine credit ceilings, and monitor the collections of past-due accounts. Managers specializing in international finance develop financial and accounting systems for the banking transactions of multinational organizations.

***Cash managers*** monitor and control the flow of cash receipts and disbursements to meet the business and investment needs of the firm. For example, cash flow projections are needed to determine whether loans must be obtained to meet cash requirements or whether surplus cash should be invested in interest-bearing instruments. ***Risk and insurance managers*** oversee programs to minimize risks and losses that might arise from financial transactions and business operations undertaken by the institution. They also manage the organization's insurance budget.

Financial institutions, such as commercial banks, savings and loan associations, credit unions, and mortgage and finance companies,



as lending, trusts, mortgages, and investments, or programs, including sales, operations, or electronic financial services. These managers may be required to solicit business, authorize loans, and direct the investment of funds, always adhering to State laws and regulations.

Branch managers of financial institutions administer and manage all of the functions of a branch office, which may include hiring personnel, approving loans and lines of credit, establishing a rapport with the community to attract business, and assisting customers with account problems. Financial managers who work for financial institutions must keep abreast of the rapidly growing array of financial services and products.

In addition to the general duties described above, all financial managers perform tasks unique to their organization or industry. For example, government financial managers must be experts on the government appropriations and budgeting processes, whereas healthcare financial managers must be knowledgeable about issues surrounding healthcare financing. Moreover, financial managers must be aware of special tax laws and regulations that affect their industry.

Financial managers play an increasingly important role in mergers and consolidations and in global expansion and related financing. These areas require extensive, specialized knowledge on the part of the financial manager to reduce risks and maximize profit. Financial managers increasingly are hired on a temporary basis to advise senior managers on these and other matters. In fact, some small firms contract out all accounting and financial functions to

The role of the financial manager, particularly in business, is changing in response to technological advances that have significantly reduced the amount of time it takes to produce financial reports. Financial managers now perform more data analysis and use it to offer senior managers ideas on how to maximize profits. They often work on teams, acting as business advisors to top management. Financial managers need to keep abreast of the latest computer technology in order to increase the efficiency of their firm's financial operations.

## **2. Working conditions**

Financial managers work in comfortable offices, often close to top managers and to departments that develop the financial data these managers need. They typically have direct access to state-of-the-art computer systems and information services. Financial managers commonly work long hours, often up to 50 or 60 per week. They generally are required to attend meetings of financial and economic associations and may travel to visit subsidiary firms or to meet customers.

## **3. Employment**

While the vast majority is employed in private industry, nearly 1 in 10 works for the different branches of government. In addition, although they can be found in every industry, approximately 1 out of 4 are employed by insurance and finance establishments, such as banks, savings institutions, finance companies, credit unions, and

#### **4. Training, Other qualifications and Advancement**

A bachelor's degree in finance, accounting, economics, or business administration is the minimum academic preparation for financial managers. However, many employers now seek graduates with a master's degree, preferably in business administration, economics, finance, or risk management. These academic programs develop analytical skills and provide knowledge of the latest financial analysis methods and technology.

Experience may be more important than formal education for some financial manager positions—notably, branch managers in banks. Banks typically fill branch manager positions by promoting experienced loan officers and other professionals who excel at their jobs. Other financial managers may enter the profession through formal management training programs offered by the company.

Continuing education is vital for financial managers, who must cope with the growing complexity of global trade, changes in State laws and regulations, and the proliferation of new and complex financial instruments. Firms often provide opportunities for workers to broaden their knowledge and skills by encouraging employees to take graduate courses at colleges and universities or attend conferences related to their specialty. Financial management, banking, and credit union associations, often in cooperation with colleges and universities, sponsor numerous national and local training programs. Persons enrolled prepare extensively at home and then attend sessions on subjects such as accounting management, budget management, corporate cash management, financial analysis, international banking, and information systems. Many firms pay all or part of the costs for employees

who successfully complete courses. Although experience, ability, and leadership are emphasized for promotion, this type of special study may accelerate advancement.

In some cases, financial managers also may broaden their skills and exhibit their competency by attaining professional certification. There are many different associations that offer professional certification programs. For example, the Association for Investment Management and Research confers the Chartered Financial Analyst designation on investment professionals who have a bachelor's degree, pass three sequential examinations, and meet work experience requirements. The Association for Financial Professionals (AFP) confers the Certified Cash Manager credential to those who pass a computer-based exam and have a minimum of 2 years of relevant experience. The Institute of Management Accountants offers a Certified in Financial Management designation to members with a BA and at least 2 years of work experience who pass the institute's four-part examination and fulfill continuing education requirements. Also, financial managers who specialize in accounting may earn the Certified Public Accountant (CPA) or Certified Management Accountant (CMA) designations.

Candidates for financial management positions need a broad range of skills. Interpersonal skills are important because these jobs involve managing people and working as part of a team to solve problems. Financial managers must have excellent communication skills to explain complex financial data. Because financial managers work extensively with various departments in their firm, a broad overview of the business

solvers, applying their analytical skills to business. They must be comfortable with the latest computer technology. As financial operations increasingly are affected by the global economy, financial managers must have knowledge of international finance. Proficiency in a foreign language also may be important.

Because financial management is critical for efficient business operations, well-trained, experienced financial managers who display a strong grasp of the operations of various departments within their organization are prime candidates for promotion to top management positions. Some financial managers transfer to closely related positions in other industries. Those with extensive experience and access to sufficient capital may start their own consulting firms.

## **5. Job outlook**

Some companies may hire financial managers on a temporary basis, to see the organization through a short-term crisis or to offer suggestions for boosting profits. Other companies may contract out all accounting and financial operations. Even in these cases, however, financial managers may be needed to oversee the contracts.

Computer technology has reduced the time and staff required to produce financial reports. As a result, forecasting earnings, profits, and costs, and generating ideas and creative ways to increase profitability will become a major role of corporate financial

Financial managers who are familiar with computer software that can assist them in this role will be needed.

## **6. Earnings**

The Association for Financial Professionals' 16th annual compensation survey showed that financial officers' average total compensation in 2006, including bonuses and deferred compensation, was \$261,800. Selected financial manager positions had average total compensation as follows:

	<u>US\$</u>
Vice president of finance	367,000
Treasurer	301,200
Assistant vice president-finance	282,600
Controller/comptroller	268,600
Director	227,200
Assistant treasurer	223,800
Assistant controller/comptroller	231,000
Manager	167,000
Cash manager	129,400

Large organizations often pay more than small ones, and salary levels also can depend on the type of industry and location.

managers in both public and private industry receive additional compensation in the form of bonuses, which also vary substantially by size of firm. Deferred compensation in the form of stock options is becoming more common, especially for senior level executives.

## **7. Related occupations**

Financial managers combine formal education with experience in one or more areas of finance, such as asset management, lending, credit operations, securities investment, or insurance risk and loss control. Workers in other occupations requiring similar training and skills include accountants and auditors; budget analysts; financial analysts and personal financial advisors; insurance underwriters; loan counselors and officers; securities, commodities, and financial services sales agents; and real estate brokers and sales agents.

## Need For Study

- The study has great significance and provides benefits to various parties whom directly or indirectly interact with the company.
- It is beneficial to management of the company by providing crystal clear picture regarding important aspects like liquidity, leverage, activity and profitability
- The study is also beneficial to employees and offers motivation by showing how actively they are contributing for company's growth.
- The investors who are interested in investing in the company's shares will also get benefited by going through the study and easily take a decision whether to invest or not invest in the company's shares.



## **Objectives of the Study**

- To study the financial soundness of Genting Lanco (India) Private Limited.
- To study and analyse the funds management in the organization.
- To evaluate the various sources and applications in the organization.
- To give suggestions if any the measure for a better funds management in the organization.

## **Methodology**

The research methodology is collecting the data in two ways.

- Primary Data
- Secondary Data

Primary Data:

The Primary data are those which are collected a fresh and for the first time.

Secondary Data:

The secondary data are those which have already been collected by someone else and which have already been passed through the statistical process. They are Company reports, Existing reports, Journals, Websites and Balance sheets are the secondary data.

## Limitations of the study

1. The study provides an insight into the financial, personnel, marketing and other aspects of LANCO. Every study will be bound with certain limitations.
2. The below mentioned are the constraints under which the study is carried out.
3. One of the factors of the study was lack of availability of ample information. Most of the information has been kept confidential and as such as not assed as art of policy of company.

Time is an important limitation. The whole study was conducted in a period of 60 days, which is not sufficient to carry out proper interpretation and analysis.

*Chapter – 2*

**THE ELECTRICITY REGULATORY  
COMMISSION ANALYSIS  
(SUBSTANTIVE ISSUES RAISED BY  
THE PUBLIC)**

Andhra Pradesh Electricity Regulatory Commission was constituted on 31.03.1999 under the A.P. Electricity Reform Act, 1998. Since its inception, the APERC has taken several initiatives to improve the functionality of the Power Sector in the state of AP to make it viable and more importantly to protect the interests of the consumers. The commission issued Licenses to the APTRANSCO, the four Distribution Companies and the nine Rural Electric Cooperatives in the state. Six Tariff Orders have been issued. Several path breaking documents have been formulated and released relating to the performance of the Licensees and protection of the interests of the consumer's viz., Customer's right to information, Licensee's complaint handling procedure, the grid code, Guidelines for Investment proposals, Load Forecasting and Power Procurement procedure, Merit Order Dispatch and Long Term tariff Principles (LTTP) etc.

Consequent to the enactment of the Electricity Act 2003, the Commission formulated and notified a number of Regulations on important aspects of Supply of Electricity to the consumers.

Commission has facilitated competition in Power sector by notifying regulations on Terms and Conditions of Open Access (u/s 42) and is in the process of notifying regulations for Trading in Electricity (u/s 52).

Commission is also contemplating to introduce Availability Based Tariff (ABT) at the state level from 2006-07 onwards as required in the National Electricity Policy notified by

The Commission is also set to introduce Multiyear tariff regime from 2006-07 onwards so as to ensure Regulatory Certainty and to improve the financial and operational efficiency of the Distribution Licensees.

The Website is part of the endeavors of the Commission to usher in and function in an environment of transparency in its operations. Suggestions for improvement of the website are welcome.

### **Regulation No. 1 of 2007**

#### **TRANSMISSION LICENSEE STANDARDS OF PERFORMANCE**

In exercise of the powers conferred by sections 181 read with section 57 (1), 57 (2) and 86 (1) (i) of the Electricity Act, 2003 (36 of 2003), the Andhra Pradesh Electricity Regulatory Commission makes the following Regulation, namely:

#### **1. SHORT TITLE AND COMMENCEMENT**

1.1 This Regulation may be called the “Andhra Pradesh Electricity Regulatory Commission (Transmission Standards of Performance) Regulation, 2007”.

1.2 This Regulation shall be applicable to the State Transmission Utility/ Transmission Licensee in the State of Andhra Pradesh.

1.3 This Regulation extends to the whole of the State of Andhra Pradesh.

1.4 This Regulation shall come into force on the date of its publication in the official Gazette of Andhra Pradesh.

## **2. DEFINITIONS**

**2.1** In this Regulation, unless the context otherwise requires:

(a) “Act” means the Electricity Act, 2003 (Central Act No. 36 of 2003);

(b) “APTRANSCO” means Transmission Corporation of Andhra Pradesh Limited registered under the Companies Act, 1956;

(c) “CEA” means the Central Electricity Authority;

(d) “Commission” means Andhra Pradesh Electricity Regulatory Commission;

(e) “Consumer” in the context of this Regulation means any person who is provided with the transmission services by the transmission licensee and includes any person whose premises are for the time being connected for the purpose of providing transmission services from the licensee, and persons who have applied for availing transmission services from a transmission licensee.

(f) “EHV/EHT” means Extra High Voltage/Extra High Tension (voltage level above 33,000 volts);

(g) “Grid Code” means the set of principles and guidelines prepared in accordance with the terms of Section 86 (1) (h) of the Electricity Act 2003;

(h) “IEGC” means the Indian Electricity Grid Code approved by Central Electricity Regulatory Commission (CERC) and

Grid Code specified by Central Commission under clause (h) of sub-section (1) of section 79 of the Act;

(i) “PGCIL” means Power Grid Corporation of India Limited, a Central Transmission Utility notified under sub-section (1) of section 38 of the Act;

(j) “Rules” means the Indian Electricity Rules, 1956 and/or any other rules made under Act;

(k) “State” means the State of Andhra Pradesh

(l) “State Transmission System” means the system of EHV electric lines and electrical equipment operated and/or maintained by State Transmission Utility and/or any Transmission Licensee for the purpose of the transmission of electricity among generating stations, external interconnections, distribution systems and any other user connected to it with in the state of Andhra Pradesh;

(m) “User” means a person, including Generating Stations within the State, Transmission Licensees or Distribution Licensees within the State and open access customer who use the State Transmission System and who must comply with the provisions of the Grid Code;

**2.2 Words** and expressions used but not defined herein shall have the meaning assigned to them in Electricity Act 2003, Indian Electricity Grid Code, Andhra Pradesh Electricity Grid Code and Indian Electricity Rules, 1956.



### **3. OBJECTIVE**

This Regulation lays down the performance standards to maintain certain critical grid parameters within the permissible limits. These standards shall serve as guidelines for State Transmission Utility (STU)/Transmission Licensee to operate the Intra-State Transmission System for providing an efficient, reliable, coordinated and economical system of electricity supply and transmission. The main objectives of these performance standards are:

(a). To ensure that the grid performance meets minimum standards essential for the Users' system demand and proper functioning of equipment;

(b). To enable the Users to design their systems and equipment to suit the electrical environment that they operate in; and

(c). To enhance the quality standards of the State Transmission System in order to move towards standards stipulated in or established under the authority of National and State Acts and Rules in the short term and gradually towards the international standards in the long term.

### **4. STANDARDS OF PERFORMANCE**

**4.1** The Transmission performance standards are classified under the following two categories:

(a) Mandatory Standards - Those performance standards, the failure to maintain which attracts the provisions of sub-section (2) of the section 57.

(b) Desirable Standards - Those performance standards, which are desirable for providing quality, continuity and reliability of services by the Licensees, and though also specified by the Commission do not, unless provided otherwise by the Commission from time to time, attract the provisions of sub-section (2) of the section 57.

**4.2** The following standards are the mandatory standards:

(a) Voltage Variation

(b) Safety Standards

These are statutory standards to be complied with by the Licensee as per Electricity Rules 1956 wherever not inconsistent with the Act. The new Rules under section 53 of Act are yet to be issued by the CEA in consultation with the State Government. The standards specified in this Regulation shall therefore be revised after new Rules under the Act come into effect.

**4.3** Desirable standards too have been specified herein under section 86 (1) (i) of the Act, with the main objective of providing quality, continuity and reliability of services to the consumers. The Commission shall fix the time-bound schedule for implementation/compliance of/with each parameter of these standards. The following standards are specified herein as desirable of achievement:

- (a) Feeder Availability
- (b) Sub-station Availability
- (c) Voltage Unbalance
- (d) Neutral Voltage Displacement (NVD)
- (e) Voltage Variation Index (VVI)
- (f) System Adequacy
- (g) System Security

## **5. PHASING OF IMPLEMENTATION**

**5.1** The performance standards excepting the Mandatory Standards, specified herein shall be implemented in a phased manner in three stages as follows:

(a) Preliminary Stage (Level-1): The time period of two (2) years immediately after these standards come into force shall be considered as Preliminary Stage. During this preliminary stage, Standards marked as Level 1 shall be achieved, unless specified otherwise.

(b) Transition Stage (Level-2): Time period spreading up to three (3) years after the Preliminary Stage shall be considered as Transition Stage. During this period, the licensee is expected to upgrade its systems. Standards marked as Level 2 shall be achieved during Transition Stage, unless specified otherwise.

(c) Final Stage (Level-3): Two years after expiry of the Transition Stage when substantial improvements should have been carried out and the system considered to be in satisfactory condition with necessary capability improvement. Standards marked as Level 3 shall be achieved during this Final Stage.

**5.2** In all cases, where standards are specified by appropriate authorities, for example Electricity Rules 1956, such standards shall be required to be complied with as specified by that authority, may be from the preliminary stage itself.

**Standards to be complied with:**

**5.3** The Commission specifies the following standards for STU/Transmission Licensees:

**(a) Voltage Variation:**

(i) Voltage Variation is defined as the deviation of the root-mean-square (RMS) value of the voltage from its nominal RMS value, expressed in terms of percentage. Voltage Variation may be either of short duration not exceeding one minute or of long duration for a time greater than one minute.

(ii) For the purpose of these standards, the sustained variation in steady state voltage exceeding one minute duration shall be considered. The specified permissible limits of sustained voltage variation shall not apply in the cases where the circumstances are reasonably beyond the control of State Transmission Utility /Transmission Licensee e.g. major break-downs, grid failures, accidents, system distress conditions, etc.

(iii) State Transmission Utility /Transmission Licensee shall make all possible efforts to ensure that the grid voltages remain within the following voltage levels at all points of its Transmission System:

<b>Nominal Voltage (kV)</b>	<b>Maximum Value (kV)</b>	<b>Minimum Value (kV)</b>
400	420	360
220	245	200
132	145	120
33	35	30
11*	11.67	10

*\* 11kV voltages to be maintained by the transmission licensee only in those cases where 11kV supply is extended from the EHT substation.*

**(b) Safety Standards:**

(i) State Transmission Utility /Transmission Licensee shall observe the general safety requirements as laid down in IE Rules, 1956, for construction, installation, protection, operation and maintenance of electric supply lines and apparatus.

(ii) Relevant rules under IE Rules, 1956 pertaining to safety standards and practices shall be followed.

(iii) State Transmission Utility / Transmission Licensee shall develop its own Operation and Maintenance Manual (including Safety Regulations

(iii) State Transmission Utility / Transmission Licensee shall develop its own Operation and Maintenance Manual (including Safety Regulations) Clause (c) of section 73 read with Section 53 of the Act.

**(c) Feeder Availability:**

(i) The feeder availability gives the percentage of time during which the feeder remained available for transmission. Feeder Availability shall be calculated based on following formula

$$\% \text{ Availability of } = \frac{(\text{No of feeders} \times 8760 - \text{Annual outages in feeder-hours}) \times 100}{\text{Feeder Total availability in feeder-hours}}$$

Here, total availability in hours is equal to the number. of hours in a year i.e. 8760 (non-leap year)

(ii) The Transmission Licensee shall achieve 99% feeder availability from the preliminary stage itself.

**(d) Sub-station Availability:**

(i) The sub-station availability expressed in percentage is the measure of the extent the power transmission capacity remained available from a sub-station. Sub-station availability shall be calculated based on following formula:

$$\% \text{ Availability of SS} = \frac{(\text{Installed capacity in MVA} \times 8760 - \text{Outage in MVA} \times \text{Hours})}{\text{Installed capacity in MVA} \times 8760}$$

(ii) The Transmission Licensee shall achieve 97% Substation availability from the preliminary stage itself.

**(e) Voltage Unbalance:**

(i) The phase voltages of a 3-phase supply should be equal in magnitude and phase angle. The loads on each phase should be balanced. Deviations will result in decreased efficiency, negative torque, vibrations and overheating. Severe unbalance could lead to malfunctioning of some equipment. The unbalance is computed as follows:

$$\% \text{ Voltage Unbalance} = \frac{\text{Max Deviation from Mean of } \{V_{RY}, V_{YB}, V_{BR}\} \times 100}{\text{Mean of } \{V_{RY}, V_{YB}, V_{BR}\}}$$

Where,  $V_{RY}$  is Voltage between R & Y phases,  $V_{YB}$  is Voltage between Y & B phases and  $V_{BR}$  is voltage between B & R phases.

(ii) Subject to Distribution Licensee(s) observing the Grid Code Connection Conditions in this regard, the voltage unbalance shall not exceed the values given below:

Implementation Stage	Voltage Level	Limit of voltage unbalance
Preliminary Stage - Level 1	220kV and Above	2 %
Transition Stage - Level 2	132kV	3 %
Transition Stage - Level 2	33kV and 11kV buses in EHV Substation	3 %

Provided that the above limit for Voltage unbalance at the interconnection point with Distribution System are subject to

Licensee maintaining current unbalance between phases within limit of 3% applied for all feeders of one voltage class emanating from a sub-station including railway traction etc. measured at 3 sub-stations in a row. The Voltage unbalance shall be measured at sub-stations provided with measuring instruments having accuracy class within 1% limit.

**(f) Neutral Voltage Displacement (NVD):**

(i) Unbalance in loads on three phases cause shifting of neutral from earth potential. Neutral displacement is applicable for transformers with ‘Star Point’ solidly grounded. Under “solidly” grounded conditions, the potential of neutral should be equal to earth i.e. zero. But in actual conditions, the earthing of the star point is imperfect and so the star to ground offers small resistance. This results in flow of negative sequence currents (because  $I_R + I_Y + I_B$  is not equal to zero, where,  $I_R$  is the current in the R-Phase,  $I_Y$  is the current in the Y-Phase and  $I_B$  is the current in the B-Phase) through neutral to ground. The neutral therefore shifts from earth potential. This performance standard shall be achieved for star point of all EHT transformers having 33kV or 11kV on the low voltage side.

(ii) Unbalance voltages and displacement of neutral result in decreased efficiency, negative torque, leakage currents, vibrations and overheating. Severe unbalance and neutral displacement could lead to malfunctioning of some equipment.

(iii) The State Transmission Utility /Transmission Licensee shall ensure that the neutral point voltage of the transformers with respect to earth will not have potential greater than 2% of the no load phase to phase voltage of the transformer.



(iv) This standard shall be implemented in the Preliminary Stage (Level 1) itself.

**(g) Voltage Variation Index (VVI):**

Voltage Variation Index representing the degree of voltage variation from nominal value (in %) over a specified period of time shall be computed separately by the State Transmission Utility /Transmission Licensee for higher than nominal system voltage and lower than nominal system voltage as per the following formula:

$$\text{VVI} = \text{Square Root of } \left\{ \frac{\sum (V_i - V_s)^2}{N} \right\} \times (100 / V_s) \%$$
$$I = 1$$

Where,

$V_i$  = RMS value of measured voltage (in kV) at  $i^{\text{th}}$  hour in the period for which VVI is computed

$V_s$  = RMS value of the nominal system voltage i.e. 400kV, 220kV and 132kV etc. as may be applicable at the interconnection point

$N$  = Number of hourly measurements over the specified period of time

The data from defective metering or any abnormal data shall be discarded from calculations. The VVI shall be computed on monthly basis:

Preliminary Stage – Level 1       $\leq 10$       To be achieved for more than 90% of buses

Transition Stage – Level 2       $\leq 6$  To be achieved for more than 90% of buses

Final Stage – Level 3       $\leq 4$  To be achieved for more than 90% of buses

**(h) System Adequacy:**

System adequacy is the ability of the electric system to receive the generated power or supply the aggregate electrical demand and energy requirements of its consumers at all times, taking into account scheduled and reasonably expected unscheduled outage of system elements. Adequacy of the power system is usually measured in terms of Loss of Load Probability (LOLP). LOLP is the probability of transmission system capacity not being able to meet system load. LOLP can also be expressed as Loss of Load Expectation (LOLE) in hours per year. This measure does not consider the amount or duration of the generation capacity shortfall. State Transmission Utility /Transmission Licensee are expected to achieve LOLE hours in percentage as under:

Implementation Stage	Nos. of hours in year when system demand	Loss Of Load Expectation (LOLE) in
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		<b>% of hours (C=B X100/8760)</b>
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	<b>can n be fully met subject to generation availability (A)</b>	<b>can not fully met even with generation availability (B = 8760 - A)</b>	
Preliminary Stage – Level 1	7446	1314	15%
Transition Stage – Level 2	7884	876	10%
Final Stage – Level 3	8672.4	87.60	1%

**(i) System Security:**

Security is the ability of the electric system to withstand sudden disturbance such as electric short circuit or unanticipated loss of system element, detailed in Clause 6 of “Manual on Transmission Planning Criteria” issued by CEA. The State Transmission System shall be designed for a security level of “n-1” i.e. to withstand a single contingency with little negative effect. This means the most severe fault or tripping of a critical generator, transformer or line should not result in instability of the system, overloading lines and/or transformers for more than 15 minutes, voltage drop of more than 10% when the system import is increased by 20%. State Transmission Utility /Transmission Licensee shall maintain the system

security level of "n-1" (single contingency) plus spinning reserve margin for Steady State Operation.

<b>Implementation Stage</b>	<b>System Security Level of “n-1” (Single Contingency) plus spinning reserve margin of:</b>
Preliminary Stage – Level 1	No mandatory requirement
Transition Stage – Level 2	0.5% of system peak load
Final Stage – Level 3	1% of system peak load

## **6. REPORTING REQUIREMENT AND COMPLIANCE**

**6.1** State Transmission Utility /Transmission Licensee shall furnish to the Commission an half yearly report in the format prescribed at ANNEXURE-A, by October 31<sup>st</sup> and April 30<sup>th</sup> of each year on actual performance vis-à-vis the performance standards laid down in these standards as modified from time to time. The report shall contain all parameters irrespective of whether such parameters are applicable during the current reporting period. The State Transmission Utility /Transmission Licensee shall maintain the base data like Log Sheet, Complaint Registers and Interruption Register and relevant load flow studies in respect of system security etc. at sub-station level for compilation of monthly report at circle level. The consolidated report shall be based on circle-wise compilation for whole State Transmission Utility /Transmission Licensee. The circle-wise compilation and base data at sub-

station level shall be subject to its scrutiny as considered necessary by the Commission.

**6.2** The State Transmission Utility /Transmission Licensee shall display on their website the actual performance against the required standards on a monthly basis.

**6.3** For the purpose of this Regulation, the half-year periods would be as follows:

- (a) 1<sup>st</sup> Half year: 1<sup>st</sup> April to 30<sup>th</sup> September
- (b) 2<sup>nd</sup> Half year: 1<sup>st</sup> October to March 31<sup>st</sup>.

**6.4** The Commission may, from time to time, modify the contents of the regulation/formats or add new regulation/formats for additional information.

**6.5** In addition to the hard copies, the information shall necessarily be submitted in such electronic form or through compact disks or e-mail as the Commission may direct.

**6.6 Effect of default in compliance with the Standards**

(a) Consequent to failure of State Transmission Utility /Transmission Licensee to meet performance standards specified herein, the affected Utility/Consumers shall be entitled to seek relief/compensation from State Transmission Utility /Transmission Licensee, as may be determined by the Commission:

Provided that the STU/Transmission Licensee shall be given an opportunity of being heard before such compensation is determined by the Commission:

Provided further that the compensation so determined shall be payable within 90 days of its determination by the Commission:

Provided also that the payment of compensation by the State Transmission Utility /Transmission Licensee shall be without prejudice to any penalty, which may be imposed or prosecution initiated by the Commission as provided in the Act.

(b) The Commission at its own discretion may require the State Transmission Utility /Transmission Licensee to furnish a report on actual performance levels maintained against the standards specified by the Commission with its Petitions for Annual Revenue Requirement (ARR) and Tariff Determination, which shall be subject to public hearing for tariff setting by the Commission.

## **7. MISCELLANEOUS**

### **Annual Review of Performance Standards**

**7.1** The Commission in consultation with State Transmission Utility /Transmission Licensee shall review the performance standards for Transmission System as specified above once in every 5 years or more frequently as may be required.

## **Use of the Information**

**7.2** The Commission shall have the right to use the information submitted by State Transmission Utility /Transmission Licensee as it deems fit including publishing it or placing it on the Commission's website and/ or directing the State Transmission Utility /Transmission Licensee to display the information in the licensee's website.

## **Power to Amend**

**7.3** The Commission may, at any time add, vary, alter, modify or amend any provisions of this Regulations.

## **Savings**

**7.4** Nothing in this Regulation shall be deemed to limit or otherwise affect the inherent power of the Commission to make such orders as may be necessary to meet the ends of justice or to prevent abuses of the process of the Commission.

**7.5** Nothing in this Regulation shall bar the Commission from adopting in conformity with the provisions of the Act, a procedure, which is at variance with any of the provisions of this Regulation, if the Commission, in view of the special circumstances of a matter or class of matters and for reasons to be recorded in writing, deems it necessary or expedient for dealing with such a matter or class of matters.

**7.6** Nothing stated in this Regulation shall, expressly or implicitly, bar the Commission from dealing with any matter or exercising any power under the Act for which no Regulation has been framed, and the Commission may deal with such matters, powers and functions in a manner it thinks fit.

### **Exemption**

**7.7** The Commission may relax adherence to specific performance standard during Force Majeure conditions such as war, mutiny, civil commotion, riot, flood, cyclone, storm, lightening, earthquake, grid failure, and strike/curfew, lockout, fire affecting the State Transmission Utility's/ Transmission Licensee's installations and operation activities.

**7.8** The Commission under specific circumstances may also relax any provisions of Regulation in general or in specific cases for the period(s) specified in its order(s).



## ***Chapter – 3***

# POWER INDUSTRY

## INDUSTRY PROFILE

ELECTRICITY is one of the vital requirements in the over all development of the economy and is therefore, appropriately called the **‘Wheel of Development’**. In fact, the power sector has played a dominant role in the socio-economic development of the country. As a convenient versatile and relatively cheap form of energy it plays a crucial role in agriculture, transport, industry and domestic sector. Hence power has all along remained in the priority list of Indian planners and plan outlays have reflected this aspect. The outlays for power sector have been around 19% of the total outlays for the public sector in various plan periods.

There has been a spectacular increase in the installed generating capacity of electricity in the country. Starting with a capacity of about 1360MW at the time of independence,

Despite tremendous increase in the availability of power since independence there is acute power shortage gap between demand and supply. The per capita consumption of power in the country is very low as

compared to the position in the developed countries. Power is a key input for economic growth has as direct relationship with the national productivity as also the overall economy of the country.

There has been diversification of the sources of generation in terms of hydel, thermal and nuclear sources. The share of hydel in the total generating capacity had drastically come down and that of thermal had shown noticeable increase. Another significant change is the increasing share of Central sectors in recent years.

The share of the thermal element in the installed generating capacity, which is also predominantly coal-based, shows a steady increase. Thus, the relatively cheaper and a more desirable change in terms of a higher share of hydel source, which is renewable, have not materialized.

### **POWER SCENARIO**

The power sector is at cross roads today. There is a chronic power shortage in the country mainly attributable to demand of power continuously outstripping the supply.

### **HYDEL POWER**

In the present global energy context, there are certain aspects, which have acquired a new significance. The development of hydropower has to be given a major thrust in the current decade. We still have large untapped hydro power potential, but its development has slowed down on account of lack of financial resources, interstate rivalry, inefficiency of certain state electricity boards, variations in the course of the monsoons etc. a concerted

effort is imperative to overcome the hurdles and enlarge the share of the hydro power generation in the country. This will help not only in tapping a renewable resource of energy, but will provide essentially needed peaking support to thermal power generation with the pattern of demand for electricity. Since the planners' initial enthusiasm about the large hydel projects has waned somewhat, India will do well to take resource to

the Chinese pattern of micro and mini hydel projects wherever the terrain is suitable.

The National Hydroelectric Power Corporation has been assigned a dominant role in accelerating the development of the large hydel potential in India, particularly in the Himalayan region.

A top level official committee has recommended a Rs. 300 Crore renovation and modernization (R &M) programmed that will seek to cover 93 hydel power plants in India and result in additional capacity of 527.81 MW.

The growth of the power sector was marked by adequate share of hydro capacity up to the end of Third five-year Plan (1961-66). However, thereafter there has been a continued decline and the proportion of hydropower has dropped from 45.86% in 1966 to about 28% by March 1992. Many of the problems in the power supply and power system in the country can be attributed inter alia to the declining hydro share in the power

system and consequent growth of thermal development in the sub-optimal manner.

Government of India has recently constituted a group to identify new hydel projects on which advance action can be taken. In order to give a boost to the development of hydro power more and more hydro electric projects are being planned or being implemented in the central sector. In order to achieve this four Corporations have already been set up under Central or in joint sectors.

They are

1. National Hydroelectric Power Corporation (NHPC).
2. Northeastern Electric Power Corporation (NEEPCO).
3. Tathpa Jhohri Power Corporation (NJPC).

### **MINI HYDEL PLANTS:**

There are a number of states in the Country where mini hydel projects can be set up at comparatively lower investments to supplement other sources of energy. According to reliable estimates the total potential of mini-hydel plants all over the country is around 5000MW. This includes 2,000MW in hilly areas at “high heads and low discharge” points and 300MW at “low heads and low Discharge” points. Particular drops and irrigation systems.

Many of the States have surveyed potential mini-hydel schemes and identified several sites for instance, Punjab has identified 130 falls. With

a combined capacity of 100 MW. Andhra Pradesh has identified projects that could yield a total of 50MW while Karnataka has estimated that some 175 mini- hydel projects in the state could yield 200 MW. Jammu&Kashmir have identified 54 mini-hydel project sites while TamilNadu has carried out feasibility studies on 72 sites with a total potential of 150MW.

The World Bank has estimates, the cost of generation from mini-hydel turbines to be only 60 paise per kWh at 60 per cent plant load factor.

#### **MINI-HYDEL SCHEMES HAVE SEVERAL ADVANTAGES.**

1. They do not require larger capital investment and their gestation period is only 12 to 18 months.
2. They are ideal for decentralized energy generating sources.
3. These projectors cause very little environmental disturbances, and also do not have to depend on any of the already depleting sources of energy.
4. A large number of sites for mini-hydel projects are easily accessible, as they are located on existing canals and irrigation systems.

#### **THERMAL POWER:**

Thermal units have emerged as the largest source of power in India. But unfortunately, the progress of power generation in this sector has not been marked by any new breakthrough. At present stress continues to be laid on thermal power station because of shorter construction time. Using better project management techniques is shortening the construction period

for these plants. It has been possible to improve overall efficiency of thermal plant by using gas turbines in conjunction with conventional steam turbines.

The union government has, in order to step up central generation in the country, established super thermal power Station in different regions. The National Thermal power Corporation (NTPC) was established in 1975 with the object of planning, promoting and organizing integrated development of thermal power in the country.

### **HIGHLIGHTS:**

1. Two part system for thermal tariffs and single tariff for hydel projects.
2. Exchange fluctuations to be compensated
3. Operating and Maintenance expenses at 2.5 per cent respectively for thermal and hydel units in the base year.
4. Optimal capacity utilization norm for thermal units: 6000kwh/kw/year: 90 per cent dependable hydrology for stations exceeding 15ME capacity.
5. Tariff to be computed for a period of five years.
6. Rate of return on equity will be 16 per cent.

### **THE STATE ELECTRICITY BOARDS:**

The State electricity boards (SEBs) are autonomous bodies created under the Electricity (supply) act, 1948 and have the statutory responsibility of generating and supplying power in the most economical

manner to the consumers. The underlying idea behind the central enactment was to confer autonomy on the SEBs so as to enable them to function strictly on Commercial principles.

### **ROLE OF NATIONAL THERMAL POWER CORPORATION (NTPC)**

In just 17 years National Thermal Power Corporation (NTPC) has grown to be the largest producer of electric power in the Country. With over 13,000MW commissioned capacity and approved capacity of 16,835MW at an estimate of Rs. 23,218 Crore. This installed capacity of the company accounts for about 26% of the thermal capacity and 18% of the total capacity of the country. The company has also played the lead role in the augmentation of transmission network by setting up of around 17,000 circuit kilometers of high voltage transmission network across the country. These transmission systems now stand transferred to the newly formed Power grid Corporation of India. NTPC has been playing a significant role in meeting the Country's power demand.



## **GEO POWER SYSTEM**

Geo Power System is a natural air-conditioning system for residential and commercial premises, using geothermal energy available beneath the ground surface at a depth of 5 meters. It is intelligently designed to ventilate the interiors to all corners and to effectively enhance the internal conditions by removal of formaldehyde which is harmful to ones health. This system provides natural environment-like conditions to oneself, increases house life and protects the environment.

### **Geo Thermal Energy**

Geo Thermal energy can be explained in simple terms as the thermal energy available at a depth of 5 meters below the ground where the temperature remains stable all round the year between 15-18 degrees Centigrade i.e. 59-65 degrees Fahrenheit. This thermal energy does not change with respect to the outside temperature considerably. The only change visible is very small which also has a time lag with respect to outside temperature. The temperatures beneath the ground are rather cool (15 degrees C) when in summer and warm enough (18 degrees C) during winter. This provides the feed for the natural air conditioning system.

### **Geo Power System Operation**

GEO Power System is a three in one system combining the effectiveness of three factors namely, Geothermal Energy + Air Circulation + Ventilation. This system is one of a kind system which ensures high quality of life with high performance at a relatively low cost

## **During Summer**

Cool Air Inside/Hot Air Outside

### **Ventilation**

Ground Air is pumped into the house after being cooled by the GEO PIPE. The hot air is being ventilated out of the house through the attic ventilation

### **Circulation**

Ground Air is pumped into the house after being cooled by the GEO PIPE

## **During Winter**

**Maximum Use of Warm and Generated Heat Keep away from Cold Air.**

### **Ventilation**

Ground air is pumped into the house after being heated up by the GEO Pipe. Current Air Mass is discharged from the attic ventilation.

### **Circulation**

By Using the Geo Thermal Heat, the heat generated in the house and the available hot mass, the house is kept away from the cold. The special system namely Solar Bless introduces the heat from the sun to the cobble stone layer for recycling it to the interiors

## **The effect of Geo Power System**

### **Salient Features of Geo Power System**

**[For Human Race]**

#### **1. Recovering Self Resistance**

Human body is empowered by nature to regulate self temperature. Although this power has been declining due to the increasing usage of air conditioning systems in all seasons, the usage of this natural air conditioning system helps in the revival of this power.

#### **2. Healthy and Comfortable Living Space**

The systems usage of natural resources to effectively control the temperature and ventilate at all hours, successfully creating a better, healthier and comfortable living space.

#### **3. Protects the Young and the Old**

In this age where child care and better health services for all especially of the old have taken primary significance, the power of this system which minimizes temperature differences between interior rooms helps better health keeping for the young and the old.

#### **4. Natural Purification**

The system includes natural purification of minute impurities in the air which are cleaned before being pumped into the house. This is done with the help of condensed moisture which accumulates at the surface of the cobblestones and the pipes.

## **5. Humidity control and Germ Prevention**

Using Natural Dehumidifiers and health care material like tourmaline, charcoal and copper the humidity is controlled and also help in germ prevention.

## **[Ecosystem and Environment]**

### **1. Energy Saving**

The most scarce resource in the world is the forms of energy available to mankind. With ever increasing dependence on electricity as a medium of energy, the invention of alternative energy resources is a tough ask. The usage of alternative energy form by this system greatly helps in reducing the usage of conventional electricity for air conditioning and also helps in reducing the emission of harmful CO<sub>2</sub> into the environment.

### **2. Heat Island Phenomenon Reduced**

Reduction in the usage of electric air conditioning systems helps in the reduction of the heat island phenomenon

## **[Building Structure]**

### **1. Increased Durability**

The durability of the building both exteriors and interiors is increased by the prevention of mould and dewfall. The corrosion of the building mostly due to water reasons and humidity is avoided by using dehumidifier's namely ceramic charcoal and others. This helps to maintain the good condition of the building.

### **2. Low Cost and Maintenance Friendly**

Since the system is made up of several small independent units, the maintenance is simple and the costs for the same are low.

## **NUCLEAR ENERGY:**

The planners, right from the beginning understood the importance of nuclear energy in meeting the country's long-term energy needs. Recognizing that nuclear technology would be subject to a progressively restrictive technology central regime and also that the long term strategies for exploitation of the country's vast thorium resources are bound to be some what different from those of most other countries engaged in nuclear power development, tremendous emphasis was placed on achieving self reliance in technology development. This policy has yielded rich dividends and today one can proudly use the realization of indigenous capability in all aspects of the nuclear fuel cycle.

1. Tarapur Atomic Power Station (TAPS)-It provides electricity to Maharashtra and Gujarat.

2. Rajasthan Atomic Power Station (RATS)-It provides electricity to Rajasthan.
3. Madras Atomic Power Station (MAPS)-It provides electricity to Madras.
4. Narora Atomic Power Station (NAPS)-It provides electricity to up and Delhi.

### **ADVANTAGES:**

1. Nuclear source is clean, compact and concentrated.
2. Nuclear is economical.
3. A unit of electricity from the nuclear power stations at Tarapur and Kalpakkam cost 40 to 58 paise per kWh compared with 60 to 90 paise per kWh from thermal Station in the respective regions.
4. The greatest advantage of nuclear power is that it can be installed in location even remote from hydel and coal resources.

### **OCEAN ENERGY:**

The long standing proposal to tap non-conventional source of ocean energy for power generation is expected to get a fillip with a joint team of the Tamilnadu electricity Board and the Ocean Energy Cell

Indian Institute of Technology, Madras commending the offer of the U.S. based firm sea solar power (SSP) to set up 6 Ocean Thermal Energy Conversion (OTEC) plants of 100 MW capacities each along the Tamilnadu Coast for serious consideration and recommending the setting up of one plant to begin with at Kulasekarpatnam area.

The Capital cost per K.W. of power production is estimated at US \$1000 for OTEC plant compared to US\$1100 for oil based US\$2200 for coal based, US\$2340 for hydro, and US\$2450 for nuclear power. The fuel cost in the case of OTEC is practically nil. Moreover valuable Bi products are obtained from OTEC plants. These include fresh water for irrigation and drinking, hydrogen and oxygen which can be used as feedstock in manufacture of other products, ammonia that can be used as fertilizers and methanol that can be mixed with gasoline. If the value of the power and by-products are added together, the annual income of the typical 100MW plant can amount to more than US \$100 million.

### **WIND ENERGY:**

Wind energy is fast emerging as the most cost-effective source of power as it combines the abundance of a natural element with modern technology. The growing interest in wind power technology can be attributed not only to its cost effectiveness but also to other attractive features like modularity, short project gestation and the non-polluting nature of the technology. In India, the exercise to harness wind energy includes wind pumps, wind battery chargers, stand alone wind electric generators and grid connected wind farms. The department of non-conventional energy

sources (DNES) in association with state agencies has been responsible for creating and sustaining interest in the field.

### **SOLAR ENERGY:**

It is believed that with just 0.1 per cent of the 75,000 trillion kWh of solar energy that reaches the earth, planet's energy requirement can be satisfied. Electricity can be generated with the help of solar energy through the solar thermal route, as well as directly from sunlight with the help of Solar PhotoVoltaic (SPV) technology. SPV Systems are being used for lighting, water pumping, and telecommunications and also for village size power plants in rural areas. SPV systems are being used to provide lighting under the National Literacy mission, refrigeration for vaccine storage and transport under the National immunization programme, drinking water and power for telecommunications. Indian railways have been using this technology for signaling.

### **PRICING:**

Electricity by no means is a cheap form of energy. If its efficient use is to be encouraged, the price of electricity should reflect its true economic value. There could be cross subsidization within the tariff structure to a limited extent, but this cannot be extended to a level where the viability of the industry is jeopardized.



## **PROBLEMS:**

The power sector in India is beset with a number of problems. They relate to delays in the formulation and implementation of various projects, poor utilization of capacity, bottlenecks in the supply of coal to thermal station, and its poor quality, faulty distribution and transmission arrangements and bad planning leading to an injudicious hydel thermal mix. Ecological problems are also vexing this sector.

Hurdles in environmental clearances tend to slow down completion of power projects. Compensatory afforestation and land acquisition have proved to be major bottlenecks in the clearance of power projects. The main problem faced in the case of environmental clearances is the shortage of land for compensatory afforestation. While project authorities are prepared to invest funds in afforestation land, the state governments are not able to provide the required land. The Government has proposed to set up a task force to look into clearances for power projects and speed up the clearances.

## **SHORT AND LONG TERM MEASURES TO COPE WITH THE ENERGY SHORTAGES:**

### **Short term Strategy:**

1. The increased number of short gestation gas based projects to add capacity and stabilize power supply.

2. Permitting the use of gas and oil fuels at selected power plants either to supplement or to substitute coal with a view to increase power production.
3. Undertaking renovation and modernization programs at the various thermal and hydro power plants to improve availability and performance and maximize power generation. It is hoped that Power Finance Corporation would play a significant role in this regard.
4. Improving the quality and ensuring consistency of coal supplies to power plants.
5. Reduction in Transmission & Distribution losses.
6. Effective interconnected operation of power systems in the various regions to enable transfer of power from surplus to deficit systems and also ensuring delivery of power from Central sector power plants to beneficiary states.

**Long term strategy:**

1. Acceleration of hydro development by focusing on removing the various inadequacies in organization. Management funding etc. it would be desirable and necessary to make provision of adequate funds especially earmarks for hydro development.
2. To launch a larger T & D Programmed to remove the present inadequacies, strengthening of the regional grids and bringing about an overall improvement in the T & D losses.

3. Coal benefaction by adopting more sophisticated techniques to ensure better and consistent quality of coal to the power plants.
4. Diversification of fuels and modes of transportation of coal to thermal power plants to ensure adequate supply of fuel of appropriate quality.
5. Strengthening the organization responsible for erection and commissioning of power plants.

### **PRIVATE SECTOR PARTICIPATION IN POWER GENERATION**

The central Government has formulated a scheme to encourage greater participation by private enterprises in electricity generation, supply and distribution. Private enterprises can set up units either as licensees, distributing power in a licensed area from own generation or purchased power or as generating companies, generating power for supply to the grid. The break up of the capital investment is:

1. 20% equity out of which at least 11% to be raised as promoter's contribution
2. 80% of the capital investment to be raised through loans and only 50% of this amount could be raised from public Fls.
3. Debt equity ratio has been raised up to 4:1
4. Increase in the prescribed rate of return for the license has been approved from the existing 12% to 15%.

5. Capitalization of interest during construction has been permitted at the actual cost (instead of the present 1% above the Reserve Bank rate) for the initial project as well as for the subsequent expansions.
6. Period of initial validity of the license has been increased to 30 years from the existing 20 years and subsequent extension for 20 years on each occasion.
7. Private licenses have been exempted from obtaining clearance under the MRPT act.
8. To ensure additional resources mobilization it has been proposed that at least 60% of the outlays come from sources other than public financial institutions and at least 11% through promoter's contribution.
9. A special cell to be created in department of power to deal with proposals expeditiously for private sector participation.

### **THE FUTURE:**

Government's decision to invite the private sector to participate in the power generation sector is most opportune and constructive approach Par excellence.

The positive and encouraging initiatives from the government are bound to find favourable responses from the private sector. The solution to our perennial power crunch seems to lie in private participation.

*Chapter – 4*

*OVERVIEW OF*  
**LANCO GROUP**

**PROFILE OF GENTING LANCO POWER (INDIA) PRIVATE**  
**LIMITED**  
**(OPERATIONS & MAINTENANCE COMPANY FOR LANCO**  
**KONDAPALLI POWER PRIVATE LIMITED)**

Genting Lanco Power (India) Private Limited is a subsidiary of Genting group of companies based at Kuala Lumpur, Malaysia. Genting group has its presence in diversified fields like Power, Plantations, Paper & Packaging, Entertainment, Resorts & Hotels, Property development, Cruise liners, e Commerce, Oil and Gas.

Genting group is Malaysia's leading multinational corporation and one of Asia's best-managed companies with over 36,000 employees globally. The group is renowned for its strong management leadership, financial prudence and sound investment discipline.

The combined market capitalization of the group is about US \$9 billion. The operating revenue for the group for the year 2007 is US \$1.53 billion.

Genting Lanco Power (India) Private Limited has entered in to a 15 years Operations and Maintenance Agreement with Lanco Kondapalli Power Private Limited, who are the owners of the 368 MW gas fired combined cycle power plant at kondapalli.

Genting Lanco Power (India) Private Limited has its registered office at Lanco Kondapalli Power Plant, Kondapalli IDA, and Krishna District.

## **LANCO GROUP PROFILE**

LANCO Group, headquartered in Hyderabad, India is one of the leading business houses in South India. It has an asset base of US \$ 450 million and a turnover of more than US \$ 300 million. With operational experience in power plants based on Gas, Biomass and Wind and an operating capacity of 509 MW, LANCO is heading for a capacity of 2500 MW and an asset base of US \$ 2.5 billion by the year 2010.

Lanco is a well-diversified group with activities like power generation, engineering and construction, manufacturing, Information technology (IT), and property development. Lanco group is striving to Empower, Enable and Enrich partner, business associates and to be the chosen vehicle for growth for stakeholders and source of inspiration to the society. The group is recognized as a leading player in the Indian economic scenario with operation in USA and UK. LANCO also has presence in Civil Construction, Property Development, Manufacturing of Pig Iron & Ductile Iron Spun Pipes and Information Technology. LANCO's overall growth is attributed to its technical, Commercial and managerial skills, which is appreciated by its International partners – Commonwealth Development Corporation (ACTIS/Globules) of the United Kingdom, Genting Group of Malaysia and Doosan of Korea.

## **HISTORY AND EVOLUTION**

The Lanco group of companies was established nurtured and developed by a team of dedicated young technocrats. The burning desire to achieve versatility in engineering spawned the magnificent decade –old growth of the present day multifaceted conglomerate that touches the nerve center of the country.

L. Rajagopal, a technocrat-turned industrialist, is the Founder Chairman of LANCO Group. Established in 1989, the Group's activities range from Power Generation, Engineering and Construction, Manufacturing to Information Technology. Under his dynamic leadership, the Group's capital outlay has touched a whopping US \$ 450 million and is recognized as one of the leading players in the infrastructure sector in India.

## **MEMBER OF PARLIAMENT**

After one-and-a-half decades of outstanding contribution to the industry, Rajagopal chose to enter public life in 2003. He contested the recent elections to the Lower House of Parliament for Vijayawada constituency and won a landslide victory. As a Member of Parliament, his avowed mission is to make a difference in public life.



### OBJECTIVES

1. To provide basic amenities for the rural poor.
2. To save arts of historical relevance which are on the verge of extinction.
3. To develop integrated programmes for the differently abled.
4. To encourage fresh talent in the area of sports.
5. To take up other humanitarian activities.

### **LANCO INDUSTRIES LIMITED: AN ISO 9001 CERTIFIED CO.**

Lanco industries Ltd. is established in the year 1993 had setup a state-of-the-art integrated Pig Iron and Cement Plants, which had in fact set the countries modern day technological innovations. The complex has a captive power plant generating 2.5 MW of electricity from waste that meets the substantial part of the power requirement.

### **LANCO CONSTRUCTION LTD.**

This was established in the year 1993 and has executed most demanding and difficult projects in the field of civil and construction engineering. Lanco constructions ltd. today stand tall and proud as one the leading civil engineering companies by building competencies, developing

modern construction management methods and by adopting the highest standards of quality.

**At Lanco diverse dimension of growth is achieved through converging rays of vision creating dimensions.**

KALAHASTI CASTINGS limited an example of the forward integration of the company established in 1997 located strategically beside the Pig Iron Plant avoiding re-melting and transportation it employs a refined process that ensures the highest quality and durability.

### **LANCO PROJECT LTD**

Focuses on the immense opportunities in the area of Real Estates, Construction and Property Development, International shopping malls, Food counters etc are a few projects on the anvil.

LANCO's venture into power is a natural extension of its core mission. Lanco Kondapalli Power Pvt. Ltd. is a short gestation Poly fuel based combined cycle power plant. The 368.144 mw (ISO) power plant has a build- operate -own agreement with the state government. It is Lanco's timely answer to the nation's increasing power needs. Lanco Kondapalli Power Ltd. is a joint venture involving Lanco group, Genting Group of Malaysia, Hanjung (the Korean heavy industries and Construction Company) and the Common Wealth Development Corporation Ltd. The project reflects Lanco's ability to partner with the global players and achieve inter organization synergies that give its vision great scope and reach

## **LANCO KONDAPALLI POWER PRIVATE LTD**

### **Vision:**

1. To empower, enable and enrich partners, business and associates.
2. To be the chosen vehicle of growth for the Stakeholders and a source of inspiration for the society.

### **Mission**

1. To be a leader in all areas key to the development of a nation and progress of the world.
2. To be a leader in the field of Infrastructure, Manufacturing and Information Technology.
3. To become learning organization and enable people to think like geniuses.
  - Where every associate achieves outstanding results.
  - Where capabilities are nurtured and stretched beyond boundaries for new understandings, high performance, quality relations and attainment of peace and happiness.
  - Where an employee makes transition from an old world to a new world, from an old understanding to a desired understanding and from a subordinate to an associate.

4. To constantly evolve and seek synergies between the interests of employers and those of employees and to work intelligently towards empowerment of associates.
5. In view of global competition and knowledge explosion infusion in the market place with complex, cognitive work, we seek to build efficiencies in such an uncertain environment through empowerment of employees.
  - Where decision-making is at frontline levels
  - Where decision-making responsibility vests with self-directing teams close to internal and external customers and associates take charge of their own jobs.
  - Where the organization is built, sleek, for speed, flexibility, quality and service that are essential for global competition.
6. To make association with us an enriching experience to our partners, businesses and associates.
7. To work with honest purpose, strategic planning and enduring perseverance to achieve customer satisfaction, stakeholder benefits and measurable economic growth for the organization.

### **Philosophy**

1. Assemble best people, delegate authority and don't interfere "people make the difference"

2. Business heads are entrepreneurs
3. Mistakes are facts of life. Its is response to the error that counts.

### **Success**

1. Create your luck by hard work
2. Trust + delegation = growth.

### **Work culture**

1. Commitment, creativity, efficiency, team spirit.

### **PROMOTERS AND EQUITY PARTNERS**

The power project is promoted by Lanco group of India and is co-promoted by

1. Genting Group of Malaysia
2. (CDC) common wealth development corporation UK
3. (Doosan) Doosan heavy industries and construction co.ltd in Korea.

## **LOCATION**

The plant is located at Kondapalli industrial development area in Krishna (Dist.) of Andhra Pradesh. The plant is connected by road (national high way no. 9), broad gauge railway line and is approximately 25 km from Vijayawada .The registered office is at Lanco house, No - 565, phase - III, Jubilee Hills, Road no – 92, Hyderabad, Andhra Pradesh 500033, India.

Nearest railway station	-	Kondapalli railway station
<i>Nearest airport</i>	-	<i>Gannavaram</i>
Access road	-	National highway No –9
Source of water	-	Krishna river 9-km from the site
Climatic condition	-	Tropical hot, Humid.

## **LANCO POWER PLANT /OPERATION AND MAINTENANCE**

The project comprise of a combined cycle power plant consisting of two (2) gas turbine generating units, two heat recovery steam generator and one steam turbine generation unit along with all electrical system, Controls and instrumentation, Civil, Structural and architectural works.

Lanco Kondapalli Power Private Limited (LKPPL) is an Independent Power Project (IPP) located at Kondapalli Industrial Developmental Area near Vijayawada in India, set up at a cost of around Rs.11,000 million (US \$275 million), the Plant is a 368.144 MW Combined Cycle Power Project operating on Natural Gas as Primary fuel.

The plant operates on natural gas as the main fuel and Naphtha; HSD as the alternative fuels Natural gas fuel is being received at site from Tatipaka near Rajahmundry through a pipeline laid down by GAIL

<u>Fuel</u>	<u>Received</u>
Naphtha fuel	- Through dedicated pipeline from HPCL Kondapalli depot.
HSD	- Road tankers

The Operations & Maintenance of the plant is done by GLPIPL (Genting Lanco Power (India) Private Limited) which is a joint venture of Lanco group Hyderabad and Genting Group of Malaysia.

### **AWARDS AND CERTIFICATES**

1. Leadership and Excellence Award in Safety, Health & Environment 2002 by Co-federation of Indian Industries.
2. Best Environmental Improvement award 2003 FAPCCI.
3. Certificate of Environmental management system with ISO 14001 (1996) from LRQA April 2003.

4. Environmental Excellence Award 2004 by Green-tech Foundation, New Delhi.
5. Certificate of Quality Management System with ISO 9001 LRQM; April 2004.
6. 25% Cess Rebate on Water uses by APPCB.
7. OSHAS 18001 Certified – June 2005.

### **ENVIRONMENT POLICY**

We are committed to achieve satisfaction of interested parties and protect environment by

1. Generation of power by implementation of prudent Eco friendly methods.
2. Conservation of natural resources like natural gas and water.
3. Complying to all the legal requirements.
4. Continual improvement in the environmental performance by minimizing the emission and discharges & prevention of pollution.
5. Enhancing environmental awareness among employee's contractors and surrounding society.



## **QUALITY POLICY**

We are committed to continually improve the quality of our performance through the application of our Quality policy.

1. Utilizing Commercial, Engineering and Human Resources, to Minimize Risks to Personnel, Plant & Equipment and Maximize plant Availability for Generation of Power.
2. Providing the best policies level of commercial performance for the benefit of all Stake Holders.
3. Implementing prudent utility practices and providing Healthy and Excellent Working Environment in all Disciplines of Engineering and Business as documented in the Quality System.
4. Treating all staff & families fairly and with respect while encouraging personnel growth.

## **OCCUPATIONAL HEALTH & SAFETY (OH&S) POLICY**

The Management is committed to maintain high standards of health and safety in the workplace and shall consider OH&S in all its business activities.

1. Provide a safe working place to all of our direct and indirect employees by minimizing Occupational Health & Safety Risks and practicing National Standards.
2. Monitor and maintain health, safety and welfare of all employees and comply with all applicable statutes.

3. Provide appropriate and on going Information, Instruction and Training of our direct and indirect employees.

## **LKPPL'S COMMITMENT TO CLEAN & SAFE ENVIRONMENT**

### ***(Green belt Management)***

Lanco Commitment to re vegetation is

1. Encourage native fauna to develop.
2. Contribute to a reduction in green house gases
3. Reduce noise level
4. Minimize the effect of soil erosion.
5. Help to restore the site to a sustainable system.
6. Improve as the aspects of the power plant.

On going trees planting and maintaining theme are the important aspects of environmental management program at LANCO.

## **NOISE MANAGEMENT**

Efforts to minimize noise emission from equipment and activities.

1. Acoustic linings around gas and steam turbines and boilers.

2. Silencers have been provided.
3. Noise minimization policy for equipment.

### **EFFLUENT DISCHARGED FROM POWER PLANT**

Well-developed chemical laboratory to cater the need for monitoring effluent quality as per APPCD Norms.

1. Gaseous emission mgt. – as issues of green house gases has become prominent in the public.
2. Water mgt. - Acknowledges importance of maintaining water quality.
3. Community participation.
4. Environmental awareness training.

### **COMPANY HIGH LIGHTS**

1. 368.144 MW combined cycle power plant under build – operate – own arrangement with the state government.
2. The single largest investment in Andhra Pradesh, by any Andhra Pradesh based group.
3. Power purchase agreement firmed with AP TRANSCO for 15 years.
4. Eco – friendly, adhering to highest standards of safety and conservation of natural resources.

5. The first project cleared by Central Electricity Authority (CEA) under the international competitive Bidding (ICB) route for power projects in India.
6. The first of the ICB power projects in India to achieve financial closure and complete construction in shortest possible time.
7. One of the lowest evacuations costs to AP TRANSCO.
8. The first private sector power project to receive disbursement of finance from Power Finance Corporation limited, India.
9. The shortest construction time in the private sector
10. Location advantages include:
  - a) Proximity to National and state Highway
  - b) Just 1.5 km from fuel storage facility of Hindustan Petroleum Corporation limited.
  - c) Close to the river Krishna and up stream of the Prakasam Barrage ensuring perennial water supply.
  - d) Adjacent to 220 kWh Substation of AP TRANSCO.

## ***Chapter-5***

### ***FUNDS FLOW STATEMENT***

## **Funds Flow Statement**

### **Introduction**

The basic financial statements i.e., the balance sheet and profit and loss account or income statement of business, reveal the net effect of various transactions on the operational and financial position of the company. The balance sheet gives a summary of the assets and liabilities of an undertaking at a particular point of time. It reveals the financial states of the company. The assets side of a balance sheet shows the deployment of resources of an undertaking while the liabilities side indicates its obligations i.e., the manner in which these resources were obtained. The profit and loss account reflects the results of the business operations for a period of time. It contains a summary of expenses incurred and the revenue realized in an accounting period and the revenue realized in an accounting period. Both the statement provides the essential basic information on the financial activities of a business but their usefulness is limited for analysis and planning purposes. The balance sheet gives a static view of the resources (liabilities) of a business and the uses (assets) to which these resources have been put at a certain point of time. It does not disclose the causes for changes in the assets and liabilities between two different point of time. The profit and loss account, in a general way indicates the resources provided by operations. But there are many transactions that take place in an undertaking and which do not operate through profit and loss account. Thus another statement has to be prepared to show the change in the assets and liabilities from the end of one period of time to the end of another period of time. The statement is called a statement of changes in financial position or a funds flow statement

The Funds Flow Statement is a statement, which shows the movement of funds and is a report of the financial operations of the business undertaking. It indicates various means by which funds were obtained

during a particular period and the ways in which these funds were employed. In simple words it is a statement of sources & applications of funds.

## **Meaning and concept of Funds**

The term fund has been defined in a number of ways.

### ***In a narrow sense***

It means cash only and a funds flow statement. Such a statement enumerates net effects of the various business transactions on cash and takes into account receipts and disbursements of cash.

### ***In a broader sense***

The term 'funds', refers to money values in whatever form it may exist. Here 'funds' means all financial resources, used in business whether in the form of men, material money, machinery and others.

### ***In a Popular sense***

The term 'funds', means working capital, i.e., the working capital concept of funds has emerged due to the fact that total resources of a business are invested partly in fixed assets in the form of fixed capital and partly kept in form of liquid or near liquid form as working capital.

## **Meaning and concept of Flow of funds**

The term flow means movement and includes both inflow and out flow. The term flow of funds means transfer of economic values from one asset of equity to another flow of funds is said to have taken place when any

transaction makes changes in the amount of funds available before happening of the transaction. If the effect of transaction results in the increase of funds it is called a source of funds and if it results in the decrease of funds, it is known as an application of funds. Further, in case the transaction does not change funds, it is said to have not resulted in the flow of funds.

According to the working capital concept of funds, the term flow of funds refers to the movement of funds in the working capital. If any transaction results in the increase in working capital, it is said to be a source or flow of funds and if it results in the decrease of working capital, it is said to be an application or out – flow of funds.

### ***Rule***

The flow of funds occurs when a transaction changes on the one hand a non current account and on the other a current account and vice versa only. In simple language funds move when a transactions effects

- 1 a current asset and a fixed asset, or
- 2 a fixed and a current liability or
- 3 a current asset and a fixed liability or
- 4 a fixed liability and current liability

And funds do not move when the transaction affects fixed assets and fixed liability or current assets and current liabilities.

### **Current and Non-Current Account**

To understand flow of funds it is essential to classify various accounts and balance sheet items into current and non-current categories



- Current accounts can either be current assets or current liabilities. Current assets are those assets which in ordinary course of business can be or will be converted into cash within a short period of normally one accounting year.

- Current liabilities are those liabilities which are intended to be paid in the ordinary course of business within a short period of normally one accounting year out of the current assets or the income of the business.

### List of current or working capital accounts

Current Liabilities	Current Assets
1. Bills payable	1. Cash in hand.
2. Sundry creditors or accounts payable accrued or outstanding expenses	2. Cash at bank.
3. Dividend payable Bank over draft.	3. Bills receivable.
4. Short-term loans advances & deposits.	4. Sundry debtors or accounts receivable.
5. Provision against current assets.	5. Short term loans & advances
6. Provision for taxation, if it does not amount to appropriation of profits.	6. Temporary or Marketable investments.
7. Proposed dividend (may be a current or non-current liability).	7. Inventories or stocks Such as
	1. raw material
	2. work in process
	3. stores & spares
	4. finished goods
	8. Prepaid expenses
	9. Accrued incomes

### List of non-current or permanent capital accounts

<b>Non-current or permanent liabilities</b>	<b>Non current or permanent assets</b>
1. Equity share capital	1. Goodwill
2. Preference share capital	2. Land
3. Redeemable preference share capital	3. Building
4. Debentures	4. Plant & machinery
5. Long term loans	5. Furniture & fitting
6. Share premium Account	6. Trade marks
7. Share premium account	7. Patent rights
8. Share forfeited account	8. Long-term investment
9. Profit & loss account (balance of profit, i.e., credit balance)	9. Debit balance of profit and loss account
10. Capital reserve	10. Discount on issue of shares
11. Capital redemption reserve	11. Discount on issue of debentures
12. Provision for depreciation against fixed assets	12. Preliminary Expenses
1. general reserve	13. Other deferred expenses
2. dividend equalization fund	
13. Insurance fund	
14. Compensation fund	
15. Sinking fund	
16. Investment Fluctuation fund	
17. Provision for Taxation	
18. Proposed dividend	

Procedure for knowing whether a transaction results in the flow of funds or not:

- 1. Analyses the transaction and find out the two accounts involved.**
- 2. Make journal entry of the transaction.**
- 3. Determine whether the accounts involved in the transaction are current or non-current.**
- 4. If both the accounts involved are current i.e., either current assets or current liabilities, it does not result in the flow of funds.**
- 5. If both the account involved is, non-current, i.e., either permanent assets or permanent liabilities, it still does not result in the flow of funds.**
- 6. If the accounts involved are such that one is a current account while the other is a non-current account, i.e., current asset and fixed asset, or current liability and permanent liability then it results in the flow of funds.**

Meaning and definition of funds flow statement

**Funds flow statements is a method by which we study changes in the financial position of a business enterprise between beginning and ending financial statements dates. It is a statement showing sources and uses of funds for a period of time.**

**“A statement of sources and application of funds is a technical device designed to analyze the changes in the financial condition of a business enterprise between two dates”.**

----- FOULKE

**“The funds flow statement describes the source from which additional funds were derived and the use to which these resources were put”.**

**-----ANTHONY.**

**Funds flow statement as “as a statement either prospective or retrospective setting out the sources and applications of the funds of an enterprise. The purpose of the statement is to indicate clearly the requirement of funds and how they are proposed to be raised and the efficient utilization and application of the same”**

**----- ICWA.IN GLOSSARY OF MANAGEMENT ACCOUNT**

Funds flow statement, income statement and balance sheet:

**Funds flow statement is not a substitute of an income statement, i.e., a profit & loss account and balance sheet.**

**A balance sheet is a statement of financial position or status of a business on a given date. It is prepared at the end of accounting period. The balance sheet depicts various resources of an undertaking and the deployment of these resources in various assets on a particular date.**

**Hence, funds flow statement is not competitive but complementary to financial statements. The funds statement provides additional information as regards changes in working capital. It is a tool of management for financial analysis and helps in making decisions.**

## Difference between funds flow statement and income statement

Funds flow statement	Income statement
<b>1. It highlights the changes in the financial position of a business and indicates the various means by which funds were obtained during a particular period and the ways to which these funds were employed.</b>	<b>1. It does not reveal the inflow and outflows of funds but deposits the items of expenses and income arrive at the figure of profit or loss.</b>
<b>2. It is complementary to income statement. Income statement helps the preparation of funds flow statement.</b>	<b>2. Income statement is not prepared from fund flow statement.</b>
<b>3. While preparing funds flow statement both capital and revenue item are considered.</b>	<b>3. Only revenue item are considered.</b>
<b>4. There is no prescribed format for preparing a fund flow statement.</b>	<b>4. It is prepared prescribed format.</b>

### Difference between funds flow statement & balance sheet

Funds flow statement	Balance sheet
<b>1. It is a statement of changes in financial position and hence is dynamic in nature.</b>	<b>1. It is a statement of financial position on a particular date and hence is static in nature.</b>
<b>2. It shows the sources and uses of funds in a particular period of time.</b>	<b>2. It depicts the assets and liabilities at a particular point of time.</b>
<b>3. It is a tool of management for financial analysis and helps in making decisions.</b>	<b>3. It is not of much help to management in making decisions.</b>
<b>4. Usually, schedule of changes in working has to be prepared before preparing funds flow statement.</b>	<b>4. No such schedule of changes in working capital is required. Rather profit &amp; loss account is prepared.</b>

### Uses, significance and importance of funds flow statement.

1. A fund flow statement is an essential tool for the financial analysis and is of primary importance to the financial management. The basic purpose of a funds flow statement is to reveal the changes in the working capital on the two balance sheet dates. It also describes the sources from which additional working capital has been financial and the uses to which working capital has been applied. Such a statement is particularly useful in assessing the growth of the firm. The significance or importance of

funds flow statement can be well followed from its various uses given below. **It helps in the analysis of financial operations**

The financial statements reveal the net effect of various transactions on the operational and financial position of a concern. The balance sheet gives a static view of the resources of a business and the uses to which these resources of a business and the uses to which have been put at a certain point of time. The funds flow statement explains causes for such changes and also the effect of this change on the liquidity position of the company sometime a concern may operate profitably and yet its cash position may become more and more worse. The funds flow statement gives a clear answer to such a situation explaining what has happened.

**2. It throws light on many perplexing questions of general interest**

Which otherwise may be difficult to be answered, such as

1. Why were the net current assets lesser spite of higher profits and vice versa?
2. Why more dividends could not be declared in spite of available profits?
3. How was it possible to distribute more dividends than the present earnings?
4. What happened to the proceeds of sale of fixed assets or issue of shares, debentures, ect. ?
5. What happened to the net profit? Where did they go?
6. How was the increase in working capital financed and how will it be financed in future?

**3. It helps in the formation of a realistic dividend policy**



Some times a firm has sufficient profits available for distribution as dividend but yet it may not be advisable to distribute

dividend for lack of liquid or cash resources. In such cases, a funds flow statement helps in the formation of a realistic dividend policy.

#### **4. It helps in the proper allocation of resources**

The resources of a concern are always limited and it wants to make the best use of these resources. A projected funds flow statement constructed for the future helps in making managerial decisions. The firm can plan the deployment of its resources and allocate them among various applications.

#### **5. It acts as a future guide**

A projected funds flow statement also acts a guide for future to the management. The management can come to know the various problems it is going to face in near future for want of funds. The firm's future needs want of funds. The firm's future needs of funds can be projected work in advance and also the timing of these needs.

#### **6. It helps in appraising the use of working capital**

A funds flow statement helps in explaining how effectively the management has used its working capital and also suggests ways to improve working capital position of the firm.

## **7. It helps knowing the overall credit worthiness of a firm**

The financial institutions and banks such as state financial institutions. Industrial Development Corporation, industrial finance corporation of India, industrial development bank of India, etc., all ask for funds flow statement constructed for a member of years before granting loans to know the credit worthiness and paying capacity of the firm. Hence, a firm seeking financial assistance from these institutions has no alternative but to prepare funds flow statement.

### **LIMITATIONS OF FUNDS FLOW STATEMENT**

1. It should be remembered that a funds flow statement is not a substitute of an income statement or a balance sheet. It provides only some additional information as regards changes in working capital.
2. It cannot reveal continuous changes.
3. It is not original statement but simply is arrangement of data given in the financial statements.
4. It is essentially historic in nature and projected funds flow statement cannot be prepared with much accuracy.
5. Changes in cash are more important and relevant for financial management than the working capital.

### **PROCEDURE FOR PREPARING A FUNDS FLOW STATEMENT**

The funds flow statement is prepared by comparing two balance sheets and with the help of such other information derived from the accounts as may be needed. The preparation of a funds flow statement consists of two parts :

1. Statement or schedule of changes in working capital.
2. Statement of sources and application of funds.

## **1. Statement or Schedule of changes in Working Capital**

Working Capital means the excess of current assets over current liabilities. Statement of changes in working capital is prepared to show the changes in the working capital between the two balance sheet dates. This statement is prepared with the help of current assets and current liabilities derived from the two balance sheets

As,  $\text{Working Capital} = \text{Current Assets} - \text{Current Liabilities}$

- i) An increase in current assets increases the working capital.
- ii) A decrease in current assets decreases the working capital.
- iii) An increase in current liabilities decreases the working capital.
- iv) A decrease in current liabilities increases the working capital.

A typical form for statement or schedule of changes in working capital is as follows

## 1. Statement of changes in Working Capital

			Effect in working capital	
Particulars	Previous year	Current Year	Increase	Decrease
<b>Current Assets</b>				
Cash in hand	xxx	xxx		
Cash at bank	xxx	xxx		
Bills Receivable	xxx	xxx		
Sundry Debtors	xxx	xxx		
Temporary Investments	xxx	xxx		
Stock or Inventories	xxx	xxx		
Prepaid Expenses	xxx	xxx		
Accrued Incomes	xxx	xxx		
<b>Total Current Assets</b>	<b>xxx</b>	<b>xxx</b>		
<b>Current Liabilities</b>				
Bills Payable	xxx	xxx		
Sundry Creditors	xxx	xxx		
Outstanding Expenses	xxx	xxx		
Bank Overdraft	xxx	xxx		
Short term advances	xxx	xxx		
Dividend Payable	xxx	xxx		
Proposed Dividend *	xxx	xxx		
Provision for Taxation *	xxx	xxx		
<b>Total Current Liabilities</b>	<b>xxx</b>	<b>xxx</b>	<b>xxx</b>	<b>xxx</b>
<b>Working Capital (CA - CL)</b>	<b>xxx</b>			<b>xxx</b>
Net Increase / Decrease in Working Capital	<b>xxx</b>	<b>xxx</b>	<b>xxx</b>	<b>xxx</b>

\* May or may not be a current liability.

## 2. Statement of Sources and Application of Funds

Funds flow statement is a statement which indicates various sources from which funds (working capital) have been obtained during a certain period and the uses a applications to which these funds have been put during that period. Generally, the statement is prepared in tow formats.

- i) Report Form
- ii) T Form or an Account form or Self Balancing Type.

### Specimen of Report Form of Funds Flow Statement

Particulars	Amount (Rs.)
<b>Sources of Funds</b>	
Funds from Operations	xxx
Issue of Share Capital	xxx
Raising of Long term Loans	xxx
Receipts from Partyly Paid Share Called-up	xxx
Sales of Non Current (Fixed) Assets	xxx
Non Trading Receipts (Dividend Received....)	xxx
Sale of Investment (long term)	xxx
Decrease in Working Capital	xxx
(as per schedule of changes in working capital)	xxx
<b>Total</b>	<b>xxx</b>
<b>Applications of Funds</b>	
Fuds Lost in Operations	xxx
Redemption of Preference Share Capital	xxx
Redemption of Debentures	xxx
Repayment of Long term Loans	xxx
Purchase of Non Current (Fixed) Assets	xxx
Purchase of Long term Investment	xxx
Non Trading Payments	xxx
Payment of Dividend *	xxx
Payment of Tax *	xxx
Increase in Working Capital	xxx
(as per schedule of changes in working capital)	xxx
<b>Total</b>	<b>xxx</b>

## T Form or An Account Form or Self Balancing Type Funds Flow Statement

Sources	Amount (Rs.)	Applications	Amount (Rs.)
Funds from Operations	xxx	Funds Lost in Operations	xxx
Issue of Share Capital	xxx	Redemption of Preference Share Capital	xxx
Issue of Debentures	xxx	Redemption of Debentures	xxx
Raising of Long term Loans	xxx	Repayment of Long term Loans	xxx
Receipts from Partly paid shares, called up	xxx	Purchase of Non Current (Fixed) Assets	xxx
Non trading Receipts (Dividend)	xxx	Purchase of Long term Investments	xxx
Sale of Long term Investment	xxx	Non trading Payments	xxx
Net Decrease in Working Capital	xxx	Payment of Dividends *	xxx
		Payment of Taxes*	xxx
		Net Increase in Working Capital	xxx
	xxx		xxx

### \*Note

Payment of dividend and tax will appear as an application of funds only when these items are appropriations of profits and not current liabilities.

### Basically there are two methods of calculating Funds From Operations

- a) The first method is to prepare the profit and loss account a fresh by taking into consideration only fund and operational terms which involve funds and are related to the normal operations of the business.

- b) The second method (which is generally used) is to proceed from the figure of net profit and net loss as arrived at from the profit and loss account already prepared.

Funds from Operations by this method can be calculated as under.

### Calculation of Funds from Operation

Particulars	Amount (Rs.)
Closing balance of P&L a/c or Retained Earnings ( as given in the balance sheet	xxx
<b>Add :</b> Non Fund and Non Operating items which have been already debited to P & L a/c	xxx
i) Depreciation and Depletion	xxx
ii) Amortization of fictitious and Intangible	xxx
1. Good will	xxx
2. Patents	xxx
3. Trade Marks	xxx
4. Preliminary Expenses	xxx
5. Discount on issue of Shares, etc.,	xxx
iii) Appropriation of Retained Earnings, such as	xxx
1. Transfer to General Reserve	xxx
2. Dividend Equalization Fund	xxx
3. Transfer to Sinking Fund	xxx
4. Contingency Reserve, etc.,	xxx
iv) Loss on Sale of any Non Current (Fixed) Assets, such as	xxx
1. Loss on Sale of Land & Buildings	xxx
2. Loss on Sale of Machinery	xxx
3. Loss on Sale of Furniture	xxx
4. Loss on Sale of long - term Investments, etc	xxx
v) Dividend including	xxx
1. Interim Dividend	xxx
2. Proposed Dividend (if it is an appropriation of profits and not taken as current liability	xxx

vi) Provision for Taxation (if it is not taken in Current Liability)	xxx
vii) Any other non-fund/ non operating items which have been debited to p & l a/c)	xxx
<b>Total (a)</b>	<b>xxx</b>
<b>Less : Non Fund or Non Operating items which have already been Credited to P &amp; L a/c</b>	xxx
i) Profit on Sale of Non Current (Fixed) Assets, such as	xxx
1. Profit on sale of Land & Buildings	xxx
2. Profit on sale of Plant & Machinery	xxx
3. Profit on sale of Long - term Investments, etc.,	xxx
ii) Appreciation in the value of Fixed Assets, such as Increase in the value of Land if it has been credited to P & L a/c	xxx
iii) Dividend Received	xxx
iv) Excess Provision retransferred to P & L a/c or written off	xxx
v) Any other non - operating items which has been credited to P & L a/c	xxx
vi) Opening Balance of P & L a/c or Retained Earnings (as given in the balance sheet)	xxx
<b>Total (b)</b>	<b>xxx</b>
<b>Funds Generated by Operations (Total (a) - Total (B))</b>	<b>xxx</b>

b) Funds from Operations can also be calculated by preparing adjusted Profit & Loss Account as follows.



### Adjusted Profit & Loss Account

Particulars	Amount (Rs)	Particulars	Amount (Rs)
To Depreciation & Depletion or Amortization of Fictions and Intangible Assets	xxx	By Opening Balance (of P & La/c)	xxx
Good will, Patents, Trade marks, Preliminary Expenses, etc.,		By Transfer from excess provisions	xxx
To Appropriation of Retained Earnings	xxx	By Appreciation in the value of fixed assets	xxx
Transfer to General Reserves, Dividend Equalization Fund, Sinking Fund, etc.,		By Dividends Received	xxx
To Loss on Sales of any Non - Current or Fixed Assets	xxx	By Profit on sale of fixed or non current assets	xxx
To Dividends (Including interim Dividend)	xxx	By Funds from operations (balancing figures incase debit side exceeds credit side)	xxx
To Proposed Dividend (if not taken as a current liability)	xxx		
To Provision for Taxation (if not taken as a current liability)	xxx		
To Closing balance (of P& L a/c)	xxx		
To Funds lost in Operations (balancing figure incase side exceeds the debit side)	xxx		
	<b>xxx</b>		<b>xxx</b>

## CASH FLOW STATEMENT

### INTRODUCTION

Cash plays a very important role in the entire economic life of a business. A firm needs cash to make payments to its suppliers, to incur day-to-day expenses and to pay salaries, wages, interest and dividend, etc. In fact, what blood is to a human body, cash is to a business enterprise. It is very essential for a business to maintain an adequate balance of cash. But many times, a concern operates profitably and yet it becomes very difficult to pay taxes and dividend. This may be because

- although huge profits have been earned yet cash may not have been received.
- even if cash has been received, it may have drained out (used) for some other purposes.

This movement of cash is of vital importance to the management.

We have studied in the previous chapter that the two basic financial statements, i.e., the balance sheet and profit and loss account, provide the essential basic information on the financial activities of a business, but their usefulness is limited for analysis and planning purposes. The balance sheet does not disclose the causes for changes in the assets and liabilities between two different points of time. The profit and loss account also fails to disclose the reasons for shortage of cash in spite of positive net income. Thus, another statement, called funds flow statement, was prepared to show the changes in the assets and liabilities from the end of one period of time to the end of another period of time. To underline the importance of funds statement, the Institute of Chartered Accountants of India (ICAI) issued in June, 1981 Accounting Standard-3 dealing with the preparation of statement of changes in Financial Position. The statement of changes in financial position summarized, for the period covered by it, the changes in the financial position including the sources from which funds were obtained by the enterprise and the specific uses to which such funds were applied. For this purpose, the term 'funds' was defined as cash and cash equivalents or working capital. The statement in financial position, also called Funds Flow Statement, was intended to provide a meaningful link between the balance sheet at the beginning and at the end of a period and the profit and loss account for that period.

### MEANING

Cash flow statement is a statement which describes the inflows (sources) and outflows (uses) of cash and cash equivalents in an enterprise during a period of time. Such a statement enumerates net effects of the various business transactions on cash and its equivalents and takes into account receipts and disbursements of cash. A cash flow statement summarizes the causes of changes in cash position of a business enterprise

between dates of two balance sheets. According to As-3 (Revised), an enterprise should prepare a cash flow statement and should present it for each period for which financial statements are prepared. The terms cash, cash equivalents and cash flows are used in this statement with the following meanings:

1. Cash comprises cash on the hand and demand deposits with banks.
2. Cash equivalents are short term, highly liquid investments that are readily convertible into known amounts of cash and which are subject to an insignificant risk of changes in value. Cash equivalents are held for the purpose of meeting short-term cash commitments rather than for investment or other purposes.
3. Cash flows are inflows and outflows of cash and cash equivalents. Flow of cash is said to have taken place when any transaction makes changes in the amount of cash and cash equivalents available before happening of the transaction. If the effect of transaction results in the increase of cash and its equivalents, it is called an inflow (source) and if it results in the decrease of total cash, it is known as outflow (use) of cash.

## CLASSIFICATION OF CASH FLOWS

Cash flows are classified into three main categories:

1. Cash flows from operating activities.
2. Cash flows from investing activities.
3. Cash flows from financing activities.

### 1. Cash Flows From Operating Activities:

Operating activities are the principal revenue-producing activities of the enterprise and other activities that are not investing or financing activities. The amount of cash flows arising from operating activities is a key indicator of the extent to which the operations of the enterprise have generated sufficient cash flows to maintain the operating capability of the enterprise, pay dividends, repay loans, and make new investments without recourse to external sources of financing. Information about the specific components of historical operating cash flows is useful, in conjunction with other information, in forecasting future operating cash flows.

Examples of cash flows from operating activities are:

- (a) cash receipts from the sale of goods and the rendering of services;
- (b) cash receipts from the royalties, fees, commissions, and other revenue;
- (c) cash payments to suppliers of goods and services;
- (d) cash payments to and on behalf of employees.

### 2. Cash Flows From Operating Activities:

Investing activities are the acquisition and disposed of long-term assets and other investments not included in cash equivalents. The separate disclosure cash flows arising from investing activities is important because the cash flows represent the extent to which expenditures have been made for resources intended to generate future income and cash flows.

Examples of cash flows arising from investing activities are.

- (a) cash payments to acquire fixed assets (including intangibles).  
These payments include those relating to capitalized research & development costs and self constructed fixed assets;
- (b) cash payments to acquire shares, warrants, or debt instruments of other enterprises and interests in joint ventures (other than payments for those instruments considered to be cash equivalents and those held for dealing or trading purposes);
- (c) cash receipts from disposal of fixed assets (including intangibles).

### 3. Cash Flows From Financial Activities:

Financing activities are activities that results in changes in the size and composition of the owner's capital (including preference share capital in the case of a company) and borrowings of the enterprise. The separate disclosure of cash flows arising from financing activities is important because it is useful in predicting claims on future cash flows by providers of funds (both capital and borrowings) to the enterprise.

Examples of cash flows arising from financing activities are:

- (a) cash proceeds from issuing shares or other similar instruments;
- (b) cash proceeds from issuing debentures, loans, notes, bonds, and other short-term borrowings;
- (c) cash repayments of amounts borrowed such as redemption of debentures, bonds, preference shares

## OBJECTIVES

1. Information about the cash flows of an enterprise is useful in providing users of financial statements with a basis to assess the ability of the enterprise to generate cash and cash equivalents and the needs of the enterprise to utilize those cash flows.
2. The economic decisions that are taken by user require an evaluation of the ability of an enterprise to generate cash and cash equivalents and the timing and certainty of their generation.
3. The statement deals with the provision of information about the historical Changes in cash and cash equivalents of an enterprise by means of a cash flow statement which classifies cash flows during the period from operating investing and financing activities.

## SCOPE

1. An enterprise should prepare a cash flow statement and present it for each period for which financial statements are presented.
2. Users of an enterprise's financial statements are interested in how the enterprise generates and uses cash and cash equivalents. This is case regardless of the nature of the enterprise's activities and irrespective of whether cash can be viewed as the product of the enterprise, as may be the case with a financial enterprise, as may be the case with a financial enterprise.
3. Enterprises need cash for essentially the same reasons, however different their Principal revenue-producing activities might be.
4. They need cash to conduct their operations, to pay their obligations, and to provide returns to their investors

## USES AND SIGNIFICANCE OF CASH FLOW STATEMENT

Cash flow statement is of vital importance to the financial management. It is an essential tool of financial analysis for short-term planning. The chief advantages of cash flow statement are as follows:

- (1) Since a cash flow statement is based on the cash basis of accounting, it is very useful in the evaluation of cash position of a firm.
- (2) A projected cash flow statement can be prepared in order to know the future cash position of a concern so as enable a firm to plan and coordinate its financial operations properly. By preparing this statement, a firm can come to know as to how much cash will be generated into the firm and how much cash will be needed to make various payments and hence the firm can well plan to arrange for the future requirements of cash.
- (3) A comparison of the historical and projected cash flow statements can be made so as to find the variations and deficiency or otherwise in the performance so as to enable the firm to take immediate and effective action.
- (4) A series of intra-firm and inter-firm cash flow statements reveals whether the firm's liquidity (short-term paying capacity) is improving or deteriorating over a period of time and in comparison to other firms over a given period of time.
- (5) Cash flow statement helps in planning the repayment of loans, replacement of fixed assets and other similar long-term planning of cash. It is also significant for capital budgeting decisions.
- (6) Cash flow analysis is more useful and appropriate than funds flow analysis for short-term financial analysis as in a very short period it is cash which is more relevant than the working capital for forecasting the ability of the firm to meet its immediate obligations.

- (7) Cash flow statement provides information of all activities classified under operating, investing and financing activities, the funds statement even when prepared on cash basis, did not disclose cash flows from such activities separately, Thus, cash flow statement is more useful than the funds statement.

## LIMITATIONS OF CASH FLOW STATEMENTS

Despite a number of uses, cash flow statements suffers from the following limitations:

- (1) As cash flow statement is based on cash basis of accounting, it ignores the basic accounting concept of accrual basis.
- (2) Some people feel that as working capital is a wider concept of funds, a funds flow statement provides a more complete picture than cash flow statement.
- (3) Cash flow statement is not suitable for judging the profitability of a firm as non-cash charges are ignored while calculating cash flows from operating activities.

## PREPARATION OF CASH FLOW STATEMENT

The Cash Flow Statement is to be presented as per the AS-3 of the Institute of Chartered Accountants of India (ICAI). The ICAI issued AS-3 in June, 1981 for the first time. Later in March, 1997 it revised the standard. The model stipulated in AS-3 is the widely accepted model for presentation of Cash Flow Statements.

All the listed companies/entities whose financial year ends on March, 1996 and thereafter will be required to give Cash Flow Statement along with Balance Sheet and Profit and Loss Account. The above amendment comes into effect immediately I.e., w.e.f.15-2-1996

## DISTINCTION BETWEEN FUNDS FLOW STATEMENT AND CASH FLOW STATEMENT

Funds Flow Statement	Cash Flow Statement
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<p>(1) It is based on accrued basis of accounting.</p> <p>(2) Funds flow statement is concerned with changes in Working Capital position between two Balance Sheet.</p> <p>(3) Funds flow statement is based on a wider concept of funds i.e., working capital.</p>	<p>(1) It is based on cash basis of accounting.</p> <p>(2) Cash Flow statement is concerned only with the changes in cash position.</p> <p>(3) Cash flow statement is based on the narrow concept of funds i.e., cash only which is only one component of Working capital.</p>
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<p>(4) A schedule of Working capital changes is prepared in the case of Funds Flow Statement.</p> <p>(5) It shows the changes of not only cash but also of other current assets like debtors, stock etc</p> <p>(6) The statement does not start with any opening of balance of any account and does not even end with any such closing balance of any account.</p> <p>(7) It shows the changes in the current liabilities like sundry creditors, bills payable etc.</p> <p>(8) In this case, the profit from operation or the net profit is considered as a principal source of fund.</p> <p>(9) Funds Flow statement is useful for long-term financial analysis and solvency of the firm.</p>	<p>(4) No such schedule is prepared in the case of Cash Flow Statement.</p> <p>(5) It shows the change of the opening cash balance into the closing cash balance.</p> <p>(6) The statement starts with the opening cash and bank balances and ends with the closing cash and bank balances in most of the cases.</p> <p>(7) It does not show the changes in the current liabilities of the enterprise.</p> <p>(8) In this case, the main source of cash inflow is considered to be the sales and not the net profit of the business.</p> <p>(9) Cash Flow Statement as a tool of financial analysis is more useful to the management in cash planning and short-term analysis.</p>
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## PRESENTATION OF CASH FLOW STATEMENT

While preparing the cash flow statement, cash flows from operating activities are presented first, followed by investing activities and then financing activities. The individual inflows and outflows relating to investing and financing activities are presented separately in their respective categories. The operating activities section can be presented using the direct method or indirect method. In the direct method cash flow statement is presented primarily on a cash receipts and cash payments basis, instead of on accrual basis. In the indirect method, net income is adjusted for items that affected net income but did not affect cash.

Direct Method:



Format of Cash Flow Statement

Particulars	Amount Rs	Amount Rs
A. Cash Flows from Operating Activities		
Cash Receipts:		
Sales	xxx	
Interest Received	xxx	
Cash payments for	xxx	
Purchases	xxx	
Operating Expenses	xxx	
Interest payments	xxx	xxx
Income taxes	xxx	
Net Cash Flows from Operating Activities		
B. Cash Flows from Investing Activities		xxx
Sale of Plant Assets		
Sale pf Investments	xxx	
Purchase of Plant Assets	xxx	
Purchase of Investments	xxx	
Net Cash Flow used by Investing Activities		
C. Cash Flows from Financing Activities		
Repayment of Bonds and Debentures		xxx
Issue of Common Shares		
Dividend paid		
Net cash flows Financing Activities	xxx	
Net Increase/Decrease in cash	xxx	xxx
		xxx

Indirect Method:

Format of Cash Flow Statement

Particulars	Amount Rs	Amount Rs
-------------	--------------	--------------

A. Cash Flow from Operating Activities:		
Net Income	xxx	
Adjustments to Reconcile Net income to Net cash		
Provided by Operating Activities:		
Depreciation	xxx	
Gain on sale of Investments	xxx	
Loss on sale of Plant Asset	xxx	
Increase in Current Assets	xxx	
Decrease in Current Liabilities	xxx	
Net Cash Flows from Operating Activities		xxx
B. Cash Flow from Investing Activities:		
Sale of Plant Assets		
Sale of Investments		
Purchase of Plant Assets	xxx	
Purchase of Investments	xxx	
Decrease in Current Assets	xxx	
Increase in Current Liabilities	xxx	
Net Cash Flows used by Investing Activities	xxx	
C. Cash Flows from Financing Activities:		
Repayment of Bonds and Debentures		
Issue of common shares		
Dividends paid		xxx
Net Cash Flows from Financing Activities	xxx xxx xxx	
Net Increase/Decrease in cash		
		xxx

## Chapter-6

## ***DATA ANALYSIS***

Particulars	2007	2006	Increase	Decrease
Current Assets				

Sundry debtors	80712804	37856420	42856384	
Cash and bank	34043520	51690326		17646806
Other current assets	152228	857753		705525
Loans and advances	733516	923709		190193
<b>Total Current Assets</b>	<b>115642068</b>	<b>91328208</b>		
<b>Current Liabilities</b>				
Current liabilities	21596916	38591265	16994349	
Provisions	8669745	8525934		143811
<b>Total Current Liabilities</b>	<b>30266661</b>	<b>47117199</b>		
<b>Working Capital (CA - CL)</b>	<b>85375407</b>	<b>44211009</b>	<b>59850733</b>	<b>18686335</b>
<b>Net Increase / Decrease in Working Capital</b>		41164398		41164398
	<b>85375407</b>	<b>85375407</b>	<b>59850733</b>	<b>59850733</b>

Sources	Amount (Rs)	Applications	Amount (Rs)
Funds from operations	40586361	Increase in Working Capital	41164398
Charge of depreciation on fixed assets	893959	Decrease in Tax liability	315922
	<b>41480320</b>		<b>41480320</b>

Changes in Workin Capital Statement for the year 2005 -2006				
(Amout Rs.)				
Particulars	2006	2005	Increase	Decrease
<b>Current Assets</b>				
Cash and Bank	51,690,326	38,023,634	13,666,692	
Sundry Debtors	37,856,42	32,266,56	5,589,855	

	0	5		
Other Current Assets	857,753	834,963	22,790	
Loans and Advances	923,709	895,919	27,790	
<b>Total Current Assets</b>	<b>91,328,208</b>	<b>72,021,081</b>		
<b>Current Liabilities</b>				
Current Liabilities	38,591,265	8,054,827		30,536,438
Provision	8,525,934	8,010,794		515,140
<b>Total Current Liabilities</b>	<b>47,117,199</b>	<b>16,065,621</b>	<b>19,307,127</b>	<b>31,051,578</b>
<b>Net Working (CA - CL)</b>	<b>44,211,009</b>	<b>55,955,460</b>		
Decrease in Working Capital	11,744,451		11,744,451	
	<b>55,955,460</b>	<b>55,955,460</b>	<b>31,051,578</b>	<b>31,051,578</b>

Sources	Amount (Rs)	Applications	Amount (Rs)
Decrease in Working Capital	11,744,451	Funds Lost in Operation	13,757,409
Change of Depreciation on Fixed Assets	2,080,317	Decrease in Deffered Tax Liability	67,359
	<b>13,824,768</b>		<b>13,824,768</b>

Changes in Workin Capital Statement for the year 2004 -2005				
(Amout Rs.)				
Particulars	2005	2004	Decrease	
<b>Current Assets</b>				

Cash and Bank	38,023,634	9,829,327	28,194,307	
Sundry Debtors	32,266,565	58,902,926		26,636,361
Other Current Assets	834,963	79,336	755,627	
Loans and Advances	895,919	953,757		57,838
<b>Total Current Assets</b>	<b>72,021,081</b>	<b>69,765,346</b>		
<b>Current Liabilities</b>				
Current Liabilities	8,054,827	30,875,913	22,821,086	
Provision	8,010,794	1,008,703		7,002,091
<b>Total Current Liabilities</b>	<b>16,065,621</b>	<b>31,884,616</b>	<b>51,771,020</b>	<b>33,696,290</b>
<b>Net Working (CA - CL)</b>	55,955,460	37,880,730		
Decrease in Working Capital		18,074,730		18,074,730
	<b>55,955,460</b>	<b>55,955,460</b>	<b>51,771,020</b>	<b>51,771,020</b>

Funds Flow Statement			
Sources	Amount (Rs)	Applications	Amount (Rs)
Funds From Operation	16,929,227	Increase in Working Capital	18,074,730
Change of Depreciation on Fixed Assets	1,535,451	Decrease in Differed Tax Liability	389,948
	<b>18,464,678</b>		<b>18,464,678</b>

Changes in Workin Capital Statement for the year 2003 -2004				
				(Amout Rs.)
Particulars	2004	2003	Increase	Decrease
<b>Current Assets</b>				
Cash and Bank	9,829,327	29,257,945		19,428,618

Sundry Debtors	58,902,926	28,344,133	30,558,793	
Other Current Assets	79,336	735,207		655,871
Loans and Advances	953,757	236,866	716,891	
<b>Total Current Assets</b>	<b>69,765,346</b>	<b>58,574,151</b>		
<b>Current Liabilities</b>				
Current Liabilities	30,875,913	2,353,756		28,522,157
Provision	1,008,703	5,550,196	4,541,493	
<b>Total Current Liabilities</b>	<b>31,884,616</b>	<b>7,903,952</b>	<b>35,817,177</b>	<b>48,606,646</b>
<b>Net Working (CA - CL)</b>	37,880,730	50,670,199		
Decrease in Working Capital	12,789,469		12,789,469	
	<b>50,670,199</b>	<b>50,670,199</b>	<b>48,606,646</b>	<b>48,606,646</b>

Funds Flow Statement			
Sources	Amount (Rs)	Applications	Amount (Rs)
Decrease in Working Capital	12,789,469	Funds Lost in Operation	31,016,745
Change of Depreciation on Fixed Assets	1,325,259		
Issue of Share Capital	16,639,360		
Increase in Differed Tax Laibility	262,657		
	<b>31,016,745</b>		<b>31,016,745</b>

#### Changes in Workin Capital Statement for the year 2002 -2003

(Amout Rs.)

Particulars	2003	2002	Increase	Decrease
<b>Current Assets</b>				
Cash and Bank	29,257,945	23,046,048	6,211,897	
Sundry Debtors	28,344,133	10,208,744	18,135,389	

Other Current Assets	735,207		735,207	
Loans and Advances	236,866	568,967		332,101
<b>Total Current Assets</b>	<b>58,574,151</b>	<b>33,823,759</b>		
<b>Current Liabilities</b>				
Current Liabilities	2,353,756	3,704,398	1,350,642	
Provision	5,550,196	1,822,711		3,727,485
<b>Total Current Liabilities</b>	<b>7,903,952</b>	<b>5,527,109</b>	<b>26,433,135</b>	<b>4,059,586</b>
<b>Net Working (CA - CL)</b>	<b>50,670,199</b>	<b>28,296,650</b>		
Decrease in Working Capital				22,373,549
	<b>50,670,199</b>	<b>28,296,650</b>	<b>26,433,135</b>	<b>26,433,135</b>

<b>Funds Flow Statement</b>			
<b>Sources</b>	<b>Amount (Rs)</b>	<b>Applications</b>	<b>Amount (Rs)</b>
Funds From Operations	590,685	Increase in Working Captial	22,373,549
Change of Depreciation on Fixed Assets	18,788,474		
Increase in Differed Tax Laibility	2,989,000		
Miscelleneaeous expenses	5,390		
	<b>22,373,549</b>		<b>22,373,549</b>

## **Reasons.**

- The sundry debtors increased in the year 2007 when compared with 2006 because there is an increased in O&M fee.



- The cash and bank balance of 2007 is decreased due to the payment of dividends declared in 2006.
- The loans and advances includes employee claims and deposits with government; in the year 2007, the loans and advances are decreased because, the employees set off their claims.
- The other current assets majorly includes interest on deposits. The interest is decreased because the deposits are used for the payment of dividend.
- In the case of current liabilities there is an decreased in the year 2007.
- The provisions are also increased, the additional provision is created for, raised sundry debtors.

For the purpose of preparation of Funds Flow Statement we have to calculate the changes in Working Capital.

The excess of Current Assets over Current Liabilities is called Net Working Capital.

## **Interpretation**

The Working Capital Statement treated as:

- The Sundry debtors are increased in 42,856,384/- the year 2007 as compared to the year 2006.
- The Cash and Bank balances are decreased in 17,646,806/- the year 2007 as compared to the year 2006. Because the Genting Lanco company has paid the dividends in 2006.
- The Other Current Assets are also decreased in 7,05,525/- the year 2007 as compared to the year 2006. Because the company canceled the dividends in 2006. The interest is decreased that is the reason Current Assets are decreased in 2007.
- The Loans and Advances are also decreased in 1,90,193/- the year 2007 as compared to the year 2006. Because here the company set-off the Employee's claims.
- The Current Liabilities are decreased in 16,994,349/- the year 2007 as compared to the year 2006. Because additional consultancy provided by the company.
- The Provisions are increased in 1,43,811/- the year 2007 as compared to the year 2006. because the sundry debtors are increased.
- The Overall Working Capital is increased in 41,164,398/- the year 2007.
- In Funds Flow Statement the Fixed Assets are treated as source because depreciation of fixed assets are decreased in 8,93,959/- the

year 2007, the reason is Fixed Assets does not purchase by the company.

- Deffered tax liability is decreased in 3,15,922/- the year 2007.

## **Interpretation**

The Working Capital treated as:

- The Sundry debtors are increased in 5,589,855/- the year 2006 as compared to the year 2005.
- The Cash and Bank balances are increased in 13,666,692/- the year 2006 as compared to the year 2005.
- The Other Current Assets are increased in 22,790/- the year 2006 as compared to the year 2005.
- The Loans and Advances are also increased in 27,790/- the year 2006 as compared to the year 2005.
- The Current Liabilities are also increased in 30,536,438/- the year 2006 as compared to the year 2005.
- The Provisions are increased in 5,15,140/- the year 2006 as compared to the year 2005.
- The Overall Working Capital is decreased in 11,744,451/- the year 2006.

## **Interpretation**

The Working Capital treated as:

- The Sundry debtors are decreased in 26,636,361/- the year 2005 as compared to the year 2004.
- The Cash and Bank balances are increased in 28,194,307/- the year 2005 as compared to the year 2004.
- The Other Current Assets are increased in 7,55,627/- the year 2005 as compared to the year 2004.
- The Loans and Advances are decreased in 57,838/- the year 2005 as compared to the year 2004.
- The Current Liabilities are decreased in 22,821,086/- the year 2005 as compared to the year 2004.
- The Provisions are increased in 7,002,091/- the year 2005 as compared to the year 2004.
- The Overall Working Capital is increased in 18,074,730/- the year 2005.

**Interpretation**

The Working Capital treated as:

- The Sundry debtors are increased in 30,558,793/- the year 2004 as compared to the year 2003.
- The Cash and Bank balances are decreased in 19,428,618/- the year 2004 as compared to the year 2003.
- The Other Current Assets are decreased in 6,55,871/- the year 2004 as compared to the year 2003.
- The Loans and Advances are increased in 7,16,891/- the year 2004 as compared to the year 2003.
- The Current Liabilities are increased in 28,522,157/- the year 2004 as compared to the year 2003.
- The Provisions are decreased in 4,541,493/- the year 2004 as compared to the year 2003.
- The Overall Working Capital is decreased in 18,339,665/- the year 2004 because here, the company declared the dividends..

## **Interpretation**

The Working Capital Statement treated as:

- The Sundry debtors increased in 18,135,389/- the year 2003 as compared to the year 2002.
- The Cash and Bank balance is increased in 6,211,897/- the year 2003 as compared to the year 2002.
- The Other Current Assets are also increased in 7,35,207/- the year 2003 as compared to the year 2002.
- The Loans and Advances are decreased in 33,210/- the year 2003 as compared to the year 2002.
- The Current Liabilities are decreased in 1,350,642/- the year 2003 as compared to the year 2002.
- The Provisions are increased in 3,727,485/- the year 2003 as compared to the year 2002.
- The Overall Working Capital is increased in 22,373,549/- the year 2003.

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[www.nwda.gov.in](http://www.nwda.gov.in)



## • APPENDIX

### **Balance sheet as on 31<sup>st</sup> March 2007**

**(Amount in Rs.)**

Particulars	2006 - 07	2005 - 06
<b>SOURCES OF FUNDS :</b>		
<b>1) SHAREHOLDERS' FUNDS</b>		
(a) Capital	18,719,280	18,719,280
(b) Reserves and Surplus	78,340,733	37,754,372
	97,060,013	56,473,652
<b>2) DEFERRED TAX LIABILITY</b>	2,478,428	2,794,350
<b>TOTAL</b>	99,538,441	59,268,002
<b>APPLICATION OF FUNDS :</b>		
<b>1) FIXED ASSETS</b>		
(a) Gross Block	31,057,596	29,767,979
(b) Less: Depreciation	16,894,562	14,710,986
(c) Net Block	14,163,034	15,056,993
<b>2) CURRENT ASSETS, LOANS AND ADVANCES</b>		
(a) Sundry Debtors	80,712,804	37,856,420
(b) Cash and Bank Balances	34,043,520	51,690,326
(c) Other Current Assets	152,228	857,753
(d) Loans and Advances	733,516	923,709
	115,642,068	91,328,208
<b>LESS : CURRENT LIABILITIES AND PROVISIONS</b>		
(a) Liabilities	21,596,916	38,591,265
(b) Provisions	8,669,745	8,525,934
	30,266,661	47,117,199
<b>NET CURRENT ASSETS</b>	85,375,407	44,211,009
<b>TOTAL</b>	99,538,441	59,268,002

## **Profit and Loss Account for the period ended on 31<sup>st</sup> March 2007**

**(Amount in Rs.)**

Particulars	2006 - 07	2005 – 06
<b>I.INCOME</b>		
Income from Services	96,654,902	55,550,649
Other Income	2,398,220	2,285,896
<b>TOTAL</b>	99,053,122	57,836,545
<b>II.EXPENDITURE</b>		
Administrative and Other Expenses	81,334,750	75,599,719
	81,334,750	75,599,719
Less: Expenditure Reimbursable under Operations and Maintenance Agreement		
	49,474,305	49,349,892
<b>TOTAL</b>	31,860,445	26,249,827
<b>III. PROFIT BEFORE DEPRECIATION AND TAXATION</b>	67,192,677	31,586,718
Provision for Depreciation	2,183,576	2,279,917
<b>IV. PROFIT BEFORE TAXATION</b>	65,009,101	29,306,801
Provision for Taxation		
- Current	24,292,000	10,680,440
- Deferred	(315,922)	(67,359)
- Fringe Benefits	446,663	434,140
<b>V. PROFIT AFTER TAXATION</b>	40,586,359	18,259,580
Surplus brought forward from Previous Year	26,699,257	44,951,851
<b>VI. PROFIT AVAILABLE FOR APPROPRIATIONS</b>	67,285,617	63,211,431
Transfer to General Reserve	-	4,495,185
Interim Dividend Rs.15 per equity Share (2005- NIL)	-	28,078,920
Provision for Dividend Distribution Tax	-	3,938,069
<b>VII. BALANCE CARRIED TO BALANCE SHEET</b>	67,285,617	26,699,257

**Earnings Per Share - Basic & Diluted**

**22**

**10**

ON  
“FUDS FLOW STATEMENT”  
With Reference To  
**Genting Lanco Power (India) Private Limited**  
Vijayawada

In Partial Fulfillment of the Requirement  
For The Award of the Degree In

POST GRADUATE  
(PG)

Submitted  
By  
DULI SAILAJA KUMARI

Under the Guidance of  
**Mr E Naga Anil Babu**  
(Genting Lanco Power (India) Private Limited)

**ACHARYA NAGARJUNA UNIVERCITY**  
**July 2006 – May 2008**

### **CERTIFICATE**

This is to certify that Miss. **DULI SAILAJA KUMARI** of ACHARYA NAGARJUNA UNIVERSITY has successfully completed the project work titled **FUNDS FLOW STATEMENT** in partial fulfillment of requirement for the award of (POST GRADUATION) prescribed by the **ACHARYA NAGARJUNA UNIVERSITY**.

This project is the record of authentic work carried out during the academic year (2006 – 2008).

Head of the Department

Naga Sundari

## **DECLARATION**

**I , Miss. DULI SAILAJA KUMARI hereby declare that this project is the record of authentic work carried out by me during the academic year 2006 – 2008 and has not been submitted to any other University or Institute towards the award of any degree.**

**Signature of the student**

**(Duli Sailaja Kumari)**

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