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A Profile of Public Sector Undertaking- A Case Study of BHEL

Introduction

The previous chapter dealt with the development of public sector undertakings. The chapter also dealt with the different types of public enterprises, role of public sector enterprises in Indian economy, objective of public sector enterprises in India and history of public sector undertakings growth of public sector in India. The present chapter is devoted to the profile of public sector undertaking – a case study of BHEL.

The public sector has played a pivotal role in the planned economic and industrial development of the country. For the purpose of planning and national accounting, public sector in India includes all activities funded out of Governments budget. The objectives of the industrial policy were derived from the Directive Principles of State Policy in the Constitution of India. It states that the objective of the State was to promote the welfare of the people by the creation of a social order based on social, economic and political justice. One of the fundamental decisions that Jawaharlal Nehru took, after he became the Prime Minister was structuring the economy on a mixed pattern in which both the public and private sectors participated and had their roles demarcated.

The Public Sector Undertakings evolved in India after the attainment of Independence in 1947. The Railways, the Post and Telegraph Department, the Port Trusts, the Ordinance and Aircraft Factories and a few State managed undertakings, like the government salt factories, quinine factories, were some of the public sector undertakings. At the time of independence, India had an agrarian economy with a weak industrial base, low level of saving and investment and near absence of infrastructure facilities. Towards this endeavor, nationalization of some of the industrial, banking and insurance units was undertaken. The expansion of the public sector was undertaken as an integral part of the industrial policy in 1956. The Industrial Policy Resolution stated that the State will progressively assume predominance and direct responsibility for setting up new industrial undertakings and for developing transport facilities (Nishant, 2009).

BHEL is an integrated power plant equipment manufacturer and one of the largest engineering and manufacturing companies in India in terms of turnover.

BHEL is engaged in the design, engineering, manufacture, construction, testing, commissioning and servicing of a wide range of products and services for the core sectors of the economy, viz. Power, Transmission, Industry, Transportation, Renewable Energy, Oil, Gas and defense. It has 15 manufacturing divisions, two repair units, four regional offices, eight service centres and 15 regional centres. It currently operates at more than 150 project sites across India and abroad. It places strong emphasis on innovation and creative development of new technologies. BHEL research and development efforts are aimed not only at improving the performance and efficiency of its existing products, but also at using state-of-the-art
technologies and processes to develop new products. This enables BHEL to have a strong customer orientation, to be sensitive to their needs and respond quickly to the changes in the market.

The high level of quality and reliability of BHEL products is due to adherence to international standards by acquiring and adapting some of the best technologies from leading companies in the world including General Electric Company, Siemens AG and Mitsubishi Heavy Industries Ltd. together with technologies developed in the Research and Development centre.

Most of the manufacturing units and other entities have been accredited to Quality Management Systems, Environmental Management Systems and Occupational Health and Safety Management Systems. It has a share of 59% in India’s total installed generating capacity contributing 69% to the total power generated from utility sets as on March 31, 2012.

BHEL has been exporting the power and industry segment products and services for over 40 years. BHEL’s global references are spread across 75 countries. The cumulative overseas installed capacity of BHEL manufactured power plants exceeds 9,000 MW across 21 countries including Malaysia, Oman, Iraq, the UAE, Bhutan, Egypt and New Zealand.

BHEL work with a vision of becoming a global engineering enterprise providing solutions for a better tomorrow.

The greatest strength of BHEL is its highly skilled and committed workforce of 49,390 employees. Every employee is given an equal opportunity to develop himself and herself and grow in his or her career. Continuous training and retraining. Career planning, a positive work culture and participative style of management - all these have engendered development of a committed and motivated workforce setting new benchmarks in terms of productivity, quality and responsiveness (http://www.bhel.com/about.php).

BHEL is the largest engineering and manufacturing enterprises in India in the energy related infrastructure sector today. BHEL has ushered in the indigenous Heavy Electrical Equipment industry in India—a dream that has been more than realized with a well recognized track record of performance.

BHEL has over the years established its references in 68 countries of the world spanning across all the continents. In India alone, BHEL has 14 manufacturing units, 4 power sectors regional centers, 15 business offices for manufacture over 180 products under 30 major product groups besides a large number of projects sites spread all over India and abroad. This enables the Company to provide high level of quality and reliability of its products at prompt time and also to be closed to its customers and cater to their specialized needs with total solution efficiently and economically The High level of Quality and reliability of its products is due to the emphasis on design.

The company is also forgoing strategic alliances by way of Joint Venture to leverage equipment sales in the supercritical technology domain. Companies like National Thermal Power Corporation, Nuclear Power Corporation of India Ltd. Tamil Nadu electricity Board, Karnataka Power Corporation Ltd, Gujarat State Electricity Corporation Ltd, Bharat Electronics Ltd Heavy Engineering Corporation Ltd and many others have become BHEL’s esteemed partners in these ventures. (Shah, & Bhaskar, 2009).

BHEL – A Profile
The Heavy Electrical Equipment Plant located in Haridwar, is one of the major manufacturing plants of BHEL. The core business of HEEP include and manufacture of large steam and gas turbines, turbo generators, design hydro turbines and generators, hydro turbines and generators, large AC or DC motors and so on. Heavy Electrical Equipment Plant includes 7467 strong highly skilled technicians, engineers, specialists and professional experts. It is one of the four major manufacturing units of the BHEL. With turnover of 164059 lakhs PBT of Rs.32489 lakhs, HEEP added 3000 MW of power to the National grid during 2005-06. HEEP is engaged in the manufacture of Thermal and Nuclear Sets up to 1000MW, Hydro Sets up to HT Runner dial 6300mm, associated Apparatus Control gears, AC and DC Electrical machines and large size Gas Turbine of 60- 200 MW.

HEEP Haridwar contributes about 44% of India’s total installed capacity for power generation with total capacity of Thermal, Nuclear and Hydro Sets of over 45000MW currently working at a Plant Load Factor of 76% and Operational Availability of 86%. In spite of acute recession in economy, BHEL Haridwar received recent orders for Mejia-5 and 6, Sipat, Bhatinda, ChandrapurBakreshwar, Santali, Bhilai, and Dholpur.

Bharat Heavy Electrical Limited, BHEL is a Public Sector Giant of” Navratna Status. It meets the need of a variety of infra-structure sectors like Power Generation, Transmission and Distribution, Transportation, Traction, Electricals and Controls Telecommunications and various basic industries.BHEL is the largest engineering and manufacturing enterprises in India in the energy related or infrastructure sector today. It is one of its kinds in India that has been the market leader in its core business area.

BHEL is one of the leading international companies in the field of power equipment manufacture. The first plan was set up at Bhopal in 1956, which signaled the dawn of the Heavy electrical industries in India. In the early sixties, three major plants were set up at Haridwar, Hyderabad and Tiruchirappalli that form the core of the diversified product range, system and services that BHEL offers today. Thus, BHEL set up to bridge the gap between demand and supply of power generation, has developed capabilities in design, manufacture, supply, erection and commissioning of power plants equipment for thermal, hydro and nuclear power stations.

BHEL plans to be Rs.45000 Crores Company by 2011-12 and Rs.90, 000 Crores Company by 2016-17. BHEL is the only PSU among the 12 Indian Companies to figure in “Forbes Asian Fabulous 50” list. Bharat Heavy Electrical Limited was incorporated in the year 1964 to cope up with the increasing demand for a higher range of Heavy electrical equipment. Prior to this, Heavy Electrical India Ltd was incorporated during the second plan period for the manufacture of Heavy electrical and the product range of its unit in Bhopal included turbines and generators for generation of power, transformers and switchgear for transmission of power and industrial and tractions motors and controls rectifiers etc. for utilization of power.

BHEL cater to core sectors of the Indian Economy viz Power Generation and Transmission, Industry, Transportation, Telecommunication, Renewable energy, Defences, etc. The wide network of BHEL consist of 14 manufacturing divisions, four Power Sector regional centers, over 100 project sites, eight service centers and 18 regional offices that enables the company to promptly serve its customers and provide them with suitable products, systems and services efficiently and at competitive prices.

BHEL has already attained ISO 9000 certification for quality management and ISO 14001 certification for environment management. BHEL’s growth has been rather rapid and within a space of a
decade, it had accumulated technical expertise of a sophisticated nature and stood poised to fulfill the needs of the power sector. Its range of products included steam turbines and turbo alternators of unit sizes, 100mwe and 200mwe and above, hydraulic turbines and generators, traction motors, turbo sets for power stations and industries together with auxiliary equipment, turbo compressors for fertilizers and chemical industries, air blasts circuit breakers up to 400 kv, minimum oil circuit breakers. high pressure boilers, thermal water treatment plants, and high pressure steam.

Thus, it is one of the leading public sector companies. With an export presence in more than 50 countries, BHEL is truly India’s industrial ambassador to the world. In recognition of its record of consistent profitability over the years, the government of India had conferred on its ‘NAVRATNA’ status in 1997. BHEL has successfully undertaken turnkey projects on its own and possesses the requisite flexibility to interface and complement international companies for large projects, and has also exhibited adaptability by manufacturing and supplying intermediate products to the design of other manufacturers and original equipment manufacturers. The success in the area of rehabilitation and life extension of power projects has established BHEL as a reliable alternative to the OEMs for such power plants.

**Power Generation**

BHEL in Power generation sector comprises thermal, gas, hydro, and nuclear power plant business.

**Transmission and distribution**

BHEL offers wide ranging products and system for Transmission and Distribution applications. Products manufactured include power transformers, instruments transformers, dry type transformer, series and shunt reactors, capacitor banks, vacuum and SF6 circuit breakers, gas insulated switchgears and insulators.

**Industries**

BHEL is a major contributor of equipment and systems to industries, cement, sugar, fertilizers, refineries, petrochemicals, paper, oil and gas metallurgical and other process industries. The range of systems and equipment supplied includes captive power plants, co-generation plants, DG power plants, industrial steam turbines, industrial boilers and auxiliaries, waste heat recovery boilers, gas turbines, heat exchangers and pressure vessels, centrifugal compressors, electrical machines, pumps, valves, seamless steel tubes, electrostatic precipitators, fabric filters, reactors, fluidized bed combustion boilers, chemical recovery boilers and process controls.

**Transportation**

BHEL is involved in the development, dosing, engineering, marketing, production, installation, and maintenance and after sales service of rolling stock and traction propulsion systems. BHEL manufactures electric locomotives up to 5000 HP, diesel electric locomotives from 350 HP to 3100 HP, both for mainline and shunting duty applications. It also produces rolling stock for special applications viz overhead equipment cars, special well wagons and rail cum road vehicle.

**Telecommunication**

BHEL also caters to Telecommunication Sectors by way of small, medium and large switching systems.
Renewable Energy

Technologies that can be offered by BHEL for exploiting non-conventional and renewable sources of energy include wind electric generators, solar photovoltaic systems, solar heating systems, solar lanterns and battery powered road vehicles.

International Operations

BHEL is one of the largest exporters of engineering products and services from India ranking among the major power plant equipment suppliers in the world.

Products of BHEL

1. Thermal power plants
2. Nuclear power plants
3. Gas Based power plants
4. Hydro power plants
5. Dg power plants
6. Industrial sets
7. Boilers
8. Boiler Auxiliaries
9. Piping System
10. Heat exchangers and pressure
11. Vessels
12. Pumps
13. Power station Control equipment
14. Switchgear
15. Bus Ducts
16. Transformer
17. Industrial and special ceramics
18. Capacitors
19. Energy Meters
20. Electrical Machines
21. Compressors
22. Control Gear
23. Silicon Rectifiers
24. Thyristor GTO/ IGBT equipments
25. Power Devices
26. Transportation equipments
27. Oil Field equipments
Technology Upgradation, Research and Development

BHEL’s products and systems are intensive technology and Research and Development technology is of strategic importance in its endeavour to become an all inclusive engineering enterprise. During the year, BHEL has invested ₹ 982 Crore on Research and Development efforts which are 18% higher than previous year. A turnover of ₹ 7809 Crore was achieved through products and systems developed in house, an increase of 23% over the previous year.

A total of 91 patents and copyrights were granted during the year enhancing the intellectual capital to 1,438 patents and copyrights.

Significantly, BHEL was ranked as the number one company in terms of filing patents and second highest investor in Research and Development in India by Economic Times Intelligence Group. The company won the coveted CII-Thompson Reuters Innovation Award-2010 in the ‘Hi Tech Corporate’ category in recognition of its innovation and entrepreneurship in India.

In conformity with engineering and technology objective, the Corporate Research and Development Division at Hyderabad leads BHEL’s research efforts using emerging technologies to offer State of the art total engineering solutions. Research and product development centres at each of the manufacturing divisions play a complementary role. Centres of excellence have been set up for Simulators, Computational Fluid Dynamics, Permanent Magnet Machines, Surface Engineering, Intelligent Machines and Robotics and Machine Dynamics. As the Seventh in the series, BHEL has established a Centre of Excellence for Compressors & Pumps Dynamics. Initiatives for setting up of a new Centre of excellence for Nanotechnology at Hyderabad are underway. ‘Research and development Advisory Council’ has been formed with eminent scientists and dignitaries from Government of India to advise BHEL on Research and Development strategies for growth and to enable it face the new challenges in the market.

In addition to the Corporate R&D Division, BHEL has four specialized institutes viz Welding Research Institute at Trichy, Ceramic Technological Institute at Bangalore, Centre for Electric Traction and Hydro lab at Bhopal and Pollution Control Research Institute at Haridwar.

Recruitment Process in BHEL

Recruitment Process

BHEL has adopted two process of recruitment are as follows:

- **Direct**: In this requisitions the candidate in searched through the applicant data bank and given offer.
- **Through Requisitions**: In through requisitions comprises of manpower requisitions from the organization.
After the approval of requisitions the applicants are short listed from the applicant data bank based on the position, experience, skill set, and qualification as required from the requisition.

The short listed applicants are then called for an evaluation process that based on predefined steps for the respective positions. After clearing this stage an offer letter is given to the selected applicants. If the applicant is rejected the applicant goes back to the applicant data bank with appropriate status.

BHEL mainly recruits engineer trainees, supervisor trainees and artisans etc. If the vacancies are sanctioned, the recruitment is conducted according to the process. Full time regular bachelor’s degree in engineering or technology from a recognized Indian university/Institute with minimum 60% of marks is necessary.

**Job Specifications**

Metric /SSSC + National Trade Certificate in the relevant trade plus National Apprenticeship Certificate with not less than 60% of marks for General and OBC candidates, and not less than 55% of marks for SC/ST candidates in both NTC and NAC.

The selection process involves written test followed by interview. The process by which the candidate, who apply, are short listed for inviting for written test and interview, is described in detail in the advertisements issued.

- BHEL as an organization should consider more sources of recruitment as it will broaden their choice group and facilitate selection for eg field trips, unsolicited applicants.
- BHEL consider deputed employees as a source of recruitment which can prove a very important source as cost over induction can be curbed in such a case.
- BHEL should also categories their executives into different groups so that more appropriate and concerning training could be imparted to the candidates.
- BHEL can also employee experts in the selection committee for selection purpose.

**Mode of Recruitment**

Recruitment is done at three levels, unskilled, semiskilled and supervisory. All the posts are filled by reporting to the appropriate employment exchange in accordance with the acts and amendments thereafter. In case the employment exchange shows their inability to sponsor candidates an advertisement is issued in a leading daily newspaper.

**Sources of Recruitment**

- Through employment exchanges in accordance with their provisions.
- Through campus recruitments from reputed institutes.
- In-house transfers and promotion of employees possessing required skills
- Through advertisement in press.
- Through deputations from government organizations and public undertakings.
Through references to agencies who maintain a pool of people with required skill sets.
Specialists are recruited to stop brain drain or to repatriate them from foreign countries.
Any other source approved by competent persons in exceptional cases.

Preferences in Recruitment

Aim of the organization is to uplift the socio-economic status of weaker section and provide a livelihood in terms of the orders issued by Indian government.

Special consideration is given to the dependent of deceased and provides as much employment opportunities to the unfortunate section.

Procedural Details

Advertisements are issued in daily newspaper. all details are provide there in age relaxation, salary, Job title, job summary, qualification, pay scale allowances and application fee are all specified in it.

Executive or Sr. Executive Cadre

Advertisement are issued in daily newspaper to tap fully the potential available decide by competent authority which may decide to fill up the posts by persons on deputation from central or state government.

Trainees or Apprentice

Recruited under AAPRENTICE ACT and types of trainees are

- Engineers/Executive
- Supervisory
- Artisans trainees
- Commercial apprentice

Selection

Tests or interviews are conducted by selected body to any post and the selection of senior executive and other common executive cadre by corporate office including one of Sc/St category in the board.

Central Recruitment Committee

Where there is more than one division, the committee is represented by the authority of all the divisions

Human Resource Development Institute

Guided by the HRD Mission statement, that is to promote and inculcate a value-based culture utilizing the fullest potential of Human Resources for achieving the BHEL Mission, the HRDI through a
step by step strategic long term training process and several short term need based programmes based on comprehensive organisational research, enables the human resources to unearth and hone their potential.

In a major advancement, an integrated Human Resource Management system was implemented during the year 2010-11, which aims at reaching out to the internal stakeholders on real time basis and redefining the role of HR functions as a strategic partner in business, through process standardization, optimization and seamless enterprise integration.

Some of the Core programmes include Strategic need based programme, Competency based programmes and Functional Programmes like Advanced Management Programmes, General Management Programmes, Strategic Management Programmes, Senior Management Programmes, Middle Management Programmes, Young Managers Programmes and self starter programmes for budding managers.

In addition, the HIRDI provides professional support to Corporate HR and HRDCs at Units or Divisions. HRD is also accepting consulting assignments from other organisations in a selective manner.

Health, Safety and Environment Management

BHEL’s commitment towards environment is reflected in all its activities, products and services, providing safe and healthy working environment to all stakeholders. In conformity with its concern for environment, the company has taken up a number of Environment Improvement Projects, which include projects like plantation of 31 lakh trees, 47 Lakh Sq. Meter of green coverage, and 110 rainwater harvesting plants and energy and resource conservation projects in and around manufacturing units. These projects are aimed at enriching the environment, conservation of precious resources like water, energy, fuel, oil etc.

BHEL has been actively developing and acquiring clean technologies for power generation, enabling its customers to minimise the impact of power generation on the environment. Reinforcing its commitment to optimum utilisation of natural resources as well as its concern for the environment, BHEL has developed a dynamic classifier system to improve combustion efficiency of boiler and reduction of NOx emission. The company has taken up Clean Development Mechanism projects to reduce greenhouse gas emissions in a more focused and vigorous way. A broad reference list of activity projects both in house implementation and joint claim projects with customers has been generated. CDM is a planned activity for each Unit and carbon credit forms part of budgeted activity.

BHEL has supplied 210 Sq. Metre. space grades solar panels and 28 space quality batteries to ISRO for their space program. In the context of Jawaharlal Nehru National Solar Mission, BHEL shall be executing the orders for Renovation and Operation & Maintenance of SPV plants at various Islands of Lakshadweep. In conformity with Green energy initiative, an energy efficient largest single cylinder on reheate steam turbine for 100-140MW application has already been developed to harness waste heat.

The company won the prestigious Golden Peacock Award for Occupational Health and Safety 2010 from the Institute of Directors for significant achievements in the field of Occupational Health and Safety.

Corporate Social Responsibility
BHEL has developed a CSR scheme. Fostering the tradition of repaying the society at large by actively participating in the welfare of local communities through numerous Corporate Social Responsibility initiatives, BHEL undertakes socio economic and community development programmes to promote education, improvement of living conditions and hygiene in villages and communities located in the vicinity of its manufacturing plants and project sites spread across the country. Thrust is being given in eight areas- Self employment generation, Environment protection, Community Development, Education, Health Management & Medical aid, Orphanages & Old-age Homes, Infrastructural development and Disaster/Calamity Management. In addition, BHEL provides financial assistance to various NGOs/Trusts/Social Welfare Societies that are engaged in social activities throughout the country.

In conformity with CSR Guidelines issued by Department of Public Enterprises BHEL has adopted CSR Policy from 2010-11. Its constant endeavours were appreciated and recognized at the CSR Thought Leadership conclave organized by Wockhard Foundation and BHEL was awarded the India Shining Star CSR Award for outstanding work in CSR sphere in the Capital Goods sector. CMD, BHEL was awarded the Distinguished Fellow Award 2010 from the Institute of Directors for outstanding contribution in the field of Corporate Governance and Corporate Social Responsibility.

**Major Achievements**

During the year BHEL secured following prestigious orders:
- Single largest export order for Gas Turbine based Power Project, Further strengthening its foothold in Yemen, BHEL secured the prestigious order for the 4x168 MW Gas Turbine based Marib, II Power Project. This is the largest ever order for an overseas gas turbine based power project.
- Yemen entry into new market, BHEL successfully made its maiden entry in Yemen by securing orders for supply of motors.
- First ever order for motors from Kenya, BHEL for the first time secured an order for supply of motors to Mombasa Cement Ltd., Kenya.
- Maiden order for Solar cells from Hong Kong & Turkey, Entry into new market, BHEL for the first time secured orders for supply of solar cells to Hong Kong & Turkey.
- Order for Control Equipment from USA, BHEL secured order for supply of Bus Extender Modules from Metso Automation, USA.
- Continued focus on After Sales Services led to orders for Spares & Services from UAE, Bangladesh, Bhutan, France, Indonesia, Kazakhstan, Sri Lanka, Libya, Malta, Malaysia, New Zealand, Oman, Saudi Arabia, Thailand and Yemen.

**Recruitment Promotion Policy of BHEL**

From a staff strength of about 450 employees in the year 1956-57, the BHEL has grown to over 48,198 employees as on 31st March 1991. This work force is spread over four different classes, generally
recognized by the Government as Class I, II, III and IV. There are about 15 broad discipline categorized under the three main headings of (a) Engineering (b) Geo-Sciences and (c) Administration and other support services. To ensure optimum growth of officers and staff of the BHEL an enlightened personnel policy has been evolved by the BHEL under the Recruitment and Promotion Regulations, 1980. All posts in the BHEL are filled by:

- Direct Recruitment
- Promotion of employees already in services of the BHEL
- Borrowing the services of persons from the central Government or the State Government or PSUs or local or other authorities
- Any other methods as may be decided by the BHEL at meeting for reasons to be recorded in writing for appointment to any post of persons possessing special merits, qualifications or experiences.

The vacancies to be filled by direct investment are notified to the Employment Exchange in accordance with the provision of the Employment Exchange Act, 1959 or advertised in daily newspapers having circulation in major parts of the country and in such daily newspaper in regional languages as the BHEL may consider suitable.

All applications for direct recruitment are scrutinized by the appointing authority empowered to reject such applications of the candidates as do not fulfill the criteria laid down by the BHEL in Scheduled, I and II of the Recruitment and Promotion Regulations, 1980. A selection Committee consisting of at least three members is constituted to select suitable candidate. The Selection Committee adjudges the suitability of a Candidate on the basis of written examination, practical test or interview or any combination of these. The selection Committee submits to the appointing authority a list recommending the names of the candidates found suitable for appointment in order of merit. All cases of promotions are considered by a Promotion Committee duly constituted in accordance with the orders issued by the BHEL in this behalf and it consists of not less than three members. The number of employees to be considered for such vacancies shall not be less than twice the number of vacancies sought to be filled. In cases, where the criterion for promotion is merit, the Promotion Committee before selecting the employees, consider the service records and annual confidential reports. It may hold a written examination or practical test or interview or any combination of these in accordance with the procedure for determining merit as laid down by the BHEL at least two months in advance of the date of the said selection.

Thus, the Promotion Committee has to submit its recommendation to the appointing authority after arranging the names in order of merit in case where merit is the criterion and in order of seniority in cases where seniority, cum fitness is the criterion. An employee is informed of his non-selection in the cases of promotion.

In making appointment on various positions, either by direct recruitment or promotion, the BHEL provides reservation and other concessions to candidate belongings to the SC/ST and other special categories of person in accordance with the order issued by the Central Government from time to time. Besides, the BHEL may also provide reservation to a person, who is a dependent of a deceased employee of the BHEL.

The Government has accepted the recommendation of the Malaviya Committee that the employees of the BHEL should be able to expect at least two promotions during their entire period of services. However, where tests are prescribed for advancement from a given level to the next higher level such tests will be required to be passed in order to make a person eligible for promotion.
Often, promotions are on probation for a period of one year, which can be extended at the discretion of the competent authority.

**Training of Employees:**

The most valuable source an organization possesses is undoubtedly its workforce. The HRD philosophy of the BHEL believes in continuously ensuring that the dynamism, competence, motivation and effectiveness of the employees remain at high levels.

Training and development in the BHEL is a dynamic system continuously active in achieving the growth of individuals and the organization. With the rapid changes taking place in the field of technology worldwide, it is essential to keep up to date with all the latest developments in the fields of information technology and exploration production activities.

The Institute of Management Development at Dehradun along with four Regional Training Institute located at Ahmadabad, Panvel, Madras and Sibs agar and two staff Training Institute located at Naika and Rajahmundry concentrates on the development of manager, workers, union leaders and women employees, etc through training.

Training is a development mechanism for acquiring human capabilities for doing jobs at present and also in future. Therefore BHEL’s efforts are on the link training with performance appraisal and career planning.

**Wages or Salary Structure:**

The BHEL is known for being a model employer. It is clearly spelled out through its employment policy to induct the best lot of the available men and women in various disciplined or branches of its activities.

To meet this end, it has been taking care of the recommendations for revision of pay scales and other benefits given to its employees from time to time. In its follow up, the pay scale of executives of the BHEL have been revised w.e.f. 1-1-1997, on the recommendation of the Fifth Pay Commission Report and with the approval of competent authority. Besides other matters relating to the revision of pay scales the staff is reported to be taken up shortly.

**Organizational Development of BHEL**

Organizational is an important means in bringing about coordination among the various department of an enterprise. Organization in a broader term, is referred to as a process of defining and grouping the economic activities of the personnel and thus establishing the authority relationship among them. It is the frame-work within which the people pool their efforts for attaining some common objectives. This framework provides the means of assigning the related activities to various persons and determining their relationship among them. For the benefits of the enterprises, it is essential to develop the cooperation among the personnel at all levels in a controlled manner as it helps in the growth and expansion of the business enterprise by facilitating its efficient management system.

Organization has been defined in many ways, depending on the various objectives and goals to be achieved. „Massie define organization as a structure and process by which a cooperative group of human beings allocated its tasks among its members, identified relationship and integrated its activities towards common objectives”. Eyre defines organization as the framework of responsibilities, authority
and duties through which all the resources of an enterprise are brought together and coordinated for the achievement of management objectives. "The human resource development has ever been accorded

Supreme priority inception of the corporation is important. It is reflected in the BHEL's growth and development that one man set up in March 1976, which increased to a well knit family of 22,000 strong.

Risks and Concerns

The global economic recession that began in 2008 and continued till 2009, is moving towards recovery. As the global financial condition continues to improve, it remains uneven as there is downside risk on account of commodity prices, notably oil, which has the potential to move on the upswing due to uncertainties of supply and geopolitical considerations. There are mounting worries over energy security and climate change in the global context. Concern is on the rise about environment pollution in the emerging economies. Moreover, there is renewed debate on power generated from nuclear power stations and their strengthening on safety aspects. These are some factors influencing revisit of existing regulatory frameworks worldwide.

The Indian power sector has over the years caught attention of the world because of high power capacity additions program planned in the country. This has resulted in a number of international suppliers of power equipments increasing their focus on the growing Indian market by joining hands with domestic companies, setting up manufacturing facilities or augmenting their existing capabilities. Some of these international players are technology leaders, and insist on their terms & conditions including imposition of licensing restrictions on different market territories in overseas arena as a pre-condition for technology collaboration.

A combination of global competition and open access in the domestic market is putting pressure on the margins as new players are likely to move towards gaining market share by bidding aggressively. This could escalate the competitive intensity for BHEL in the long-term. The margins could also be impacted by movement in raw material prices, especially steel and copper.

Coal being the dominant fossil fuel used for power generation in India, domestic power developers are facing crunch of this natural resource due to shortage of supply as excavation of coal is not matching with demand. In addition, various other constraints like delay in obtaining environmental clearances, land acquisition and local law and order problems are affecting implementation of power projects.

India has an overall strategic imperative to balance the goals of sustainable energy use, enhanced competitiveness and maintenance of the security of the energy supply. The Indian market is moving steadily towards adaptation of new technologies, like super critical technology and its assimilation which can lead has other concerns. The domestic power sector has other concerns like limited number and capacity of balance of plant vendors in the country as well as for competent construction contractors for taking up large size power projects and handling of increased construction load, shortage of skilled manpower with sub-contractors, contractual issues between project developers, contractors and their sub-contractors etc.

In most of the business areas in which BHEL operates, the growth prospects are dependent on policy decisions at the national level as also on the prevailing business trends.
SWOT Analysis of BHEL

**Strength**

- Good corporate image
- Complete range of products for transmission and distribution
- Established Brand Name
- Sound engineering base and ability to assimilate
- Relatively stable industrial relationship
- Access to contemporary technologies with the support from renowned Collaborators.
- Ability to set up power plants on turnkey basis, complete know- how for Manufacture of entire equipment is available with the company.
- Ability to manufacture or procure to supply spares.
- Fully equipped to take capital maintenance and servicing of the power plants.
- Largest source of domestic business leading to major presence and influence in the Market.
- Ability to successfully overhaul and renovate power stations equipment of different International companies.
- Low labour cost.

**Weaknesses**

- Larger delivery cycles in comparison with international suppliers of similar equipment.
- Inability to provide supplier’s credit, soft loans and financing of power projects.
- Due to poor financial position of state electricity boards, which are the major customers of BHEL in India, liquidity position of BHEL is not satisfactory.
- The procurement process in the company is cumbersome and subject to auditing
- Low exposure to the needs and dynamics of distribution business
- Role clarity on the requirement of being an equipment supplier or a solution provider
- Acceptance of customers to execute low value high volumes jobs
- Being a public sector company BHEL is suffering from sub optimality of control due to
- Displacement of social objectives by political objectives, which may lead to redundant costs and also rising costs.
- Direct political intervention in managerial decision over an arm length relationship that would restrict government’s task of setting appropriate managerial incentive structure.
- Private goals that lead to budget growth and employment growth.
- Internal inefficiencies in bureaucratic activity.
Opportunities

✓ Demand for power and hence plant equipment is expected to grow.
✓ Private sector power plants to offer expanded market as utilities suffers resource crunch.
✓ Ageing power plants would give rise to more spares and services business.
✓ Life expansion program for old power stations.
✓ Easy processing of joint ventures/collaboration/import/acquisition of new technology.
✓ Huge investment leading to greater demand of goods and services
✓ Demand leading to industry operating at full and over capacity
✓ Better price realizations
✓ Earl birds to learn faster and achieve repeat orders
✓ Financial and operational autonomy for profit making public sector enterprises. To make the public sector more efficient government has decided to grant enhanced autonomy and delegation of powers to the profit making public sector enterprises.

Threats

✓ Purchased preference may be extended to distribution sector
✓ Increased in number of small contractors leading to price wars
✓ Emergence of new players in the market.
✓ Political pulls and pressures may jeopardize the hole process, raising alarm about the privatization and being anti-people
✓ Increased competition both national and international
✓ Multilateral agencies reluctant to lend to power sector because of poor financial management of S.E.Bs
✓ More concessions to private sector and not to government owned utilities like NTPC or S.E.Bs, so future power projects would be opened up in private sector.
✓ Level playing ground not available, foreign companies spending much more on business promotion tactics (Annul Report “BHEL”, 2010-2011).

Conclusion

BHEL is committed to drive a new phase of growth, at a time of increasing focus of Government of India on developing infrastructure sector. In this environment, the company has over a period of time established a number of differentiating competitive strengths, including a power full manufacturing base, world-class equipment performance, the technology edge, diversified business port folio, country wide efficient after, sales, service network, a robust balance sheet capable of supporting its growth ambitions and strong human capital base.

Backed by these at tributes, the company continues to pursue its ‘6-Point Strategy’ to sustain its leadership in its current business areas and capture opportunities in emerging growth areas. The essential characteristics of development are social justice with a view to eradicate poverty and reduce income
inequalities, self-reliance to avoid the dictates of the developed countries, planned utilization of the limited resources of the country, and a mechanism to carry out the plans, irrespective of profit considerations. The BHEL has continually been improving its execution capabilities. The key drivers strategy of the company are vendor base expansion, Advanced Manufacturing Actions, greater application of Information Technology, Rate Contracts, enhanced outsourcing, deployment of additional tools and plants, Away Centre Fabrication and greater empowerment of project managers. Further, to address skill deficit in power sector the company has taken various initiatives like adoption of it is and leveraging in-house training infrastructure for skill enhancement in the sector.

*The Present chapter deals with the profile of Public Sector Undertaking—A Case Study of BHEL. The next chapter is devoted to the a profile of public sector undertaking- a case study of NTPC.*
References

Annual Report (2010-2011). BHEL.

