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Human Capital Challenges in The Tamilnadu Electricity Board Ltd., Under The Context of Electricity Act, 2003

Management

KEYWORDS : Electricity Power Sector, Human Capital Challenges, generation, transmission, distribution and trading of electricity

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ABSTRACT

India has achieved significant growth in the Electricity Power Sector from the time of independence. The commendable growth in the power generation capacity, the number of electricity consumers, the number of agricultural pumps, the length of transmission and distribution network was the result of major policies framed by the Central Government in consultation with all the stakeholders in the power sector and in particular with the State Electricity Boards(SEBs).

One of the major initiatives was the power sector reforms which entails independent Regulatory Commission, unbundling of SEBs and eventual privatization especially distribution sectors has been the dominant theme in the Indian Economy Policy discourse during the later part of 1990s. Orissa was pioneer state which enacted a comprehensive Electricity Reform Legislation in 1995 which was followed by all other states. In 1996, the Central Government has also come out with a "Common Minimum National Action Plan for power". The Central Government initiative was given a legal shape in the form of Central Electricity Regulatory Commission's bill 1998. The enactment of "Electricity Act-2003" which came into force from 10.06.2003 repealing the existing enactments such as Indian Electricity Act-1910, Electricity Supply(Act)-1948 and Electricity Regulatory Commission Act-1998 has thrown the Indian Power Sector into global competition in generation, transmission, distribution and trading of electricity.

The Tamilnadu Electricity Board (TNEB) which came into being from 1957 under the repealed Act of Electricity(Supply) Act, 1948 as remained the energy producer and distributor to the erstwhile state of Tamilnadu. After 53 years of continuous journey in its endeavor, it has restructured in 2010 in line with the provisions of Electricity Act, 2003 into TNEB Limited, TANGEDCO Ltd (Tamilnadu Generation and Distribution Corporation Ltd) and TANTRANSCO Ltd (Tamilnadu Transmission Corporation Ltd).

To operate in this competitive environment, the TNEB Ltd., which has got 243 lakhs of consumer base need to improve their existing infrastructure facilities to meet the growing demands of consumers by removing all the constrains. While large scale investments have been planned by TNEB Ltd., and large numbers of projects have been launched, the lack of high quality human resources is becoming a key constrains. This research work will address the human resource challenges currently being faced by TNEB Ltd, and lays out the strategies which ultimately lead to the development of this sector and provide better quality service to the consumers as per the stipulations contained in the Electricity Act, 2003.

INTRODUCTION

The Indian economy has experienced unprecedented economic growth over the last decade. Today, India is the ninth largest economy in the world, driven by a real GDP growth of 8.7% in the last 5 years (7.5% over the last 10 years). In 2010 itself, the real GDP growth of India was 5th highest in the world, next only to Qatar, Paraguay, Singapore and Taiwan. Sustained growth in economy comes with growth from all sectors, among which growth in infrastructure sector is a key requirement for growth in sectors within manufacturing and services. With in infrastructure, growth in power sector is one of the most important requirements for sustained growth of a developing economy like India.

India is one of the largest power generating countries in the world with an installed capacity in excess of 253 GW (as on August 31, 2014) growing at a CAGR of over 10% in the last five years. The growth in the sector was facilitated with a slew of policies and regulations. The Electricity Act, 2003 ("the Act") ushered a series of reforms and competition in the power sector. Restructuring of vertically integrated utilities, de-licensing of generation, advent of competitive markets, promoting renewable energy and impetus on public private partnership model has accelerated the growth. Competition and efficiency in the sector especially in power generation has improved. However, the Indian power sector continued to face challenges in terms of power deficit and inefficiency in power distribution.

The immense potential for growth in the Indian power sector is apparent when we compare per capita consumption of electricity in India with that of the developed nations; only about 684 kilowatt hours (kWh) per capita, compared with over 7,000 kWh per capita in industrialized nations such as Germany, France and Japan in the year 2011 according to World Bank data. The Planning Commission has estimated the requirement of additional power generation capacity during the 12th Five Year Plan (2012-17) as 119 GW including 30 GW of renewable energy based capacity. Thus in terms of the potential and size, Indian power sector offers great opportunities to the investors.

However, in the last three financial years, the sector has witnessed drying up of investments in the background of a declining GDP growth rate and a policy environment that is not conducive to attract investments. A list of key issues across the value chain of the power sector is presented in the figure below. There is also a great need to make the cost of delivered power more competitive by taking steps for improving competition at each stage of the value chain - fuel production, power generation, power procurement, transmission, distribution and consumer servicing.

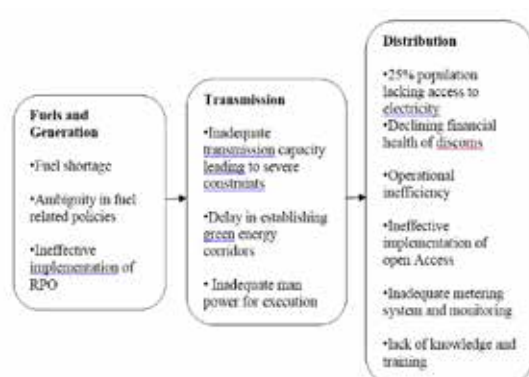

Figure 1. Key issues in the Indian Power Sector

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1. HUMAN CAPITAL MANAGEMENT

According to Oxford Advanced Learner's dictionary Brain Drain is "the movement of highly skilled and qualified people to a country where they can work in better conditions and earn more money". Brain-drain can also be named as "human capital flight" because it resembles the case of capital flight, in which mass migration of financial capital is involved. India is becoming a major supplier of human capital for the advanced economies. India is sending large numbers of these specialists compared to other important origin countries. Brain drain is the current socio-economic problem of our country. This paper mainly focuses on as India is an emerging opportunity and how this opportunity is utilized for changing brain drain to reverse brain drain so that we use our brain in the growth and development of our country (TinnaKanika, 2015).

An organization's workforce-or human capital-is its most valuable asset In addition to the traditional personnel and human resource management (HRM), there is a need for a new approach to personnel management, which we will call Human Capital Management (HCM). HCM emphasizes an alignment between the individual and the organization and in our view offers the challenge and the key to successful management in the future. An increasingly important organizational design problem for many firms is to recoup general human capital rents while maintaining the attractive career prospects for workers. Through the concept of human capital every employee is seen as an asset, as a resource that belongs to the organization and from which organization can demand all its capacity and commitment. Human capital is a treasure that a company or institution has available with respect to all the capabilities of each of its employee. Organizations need to understand the importance of human capital and develop strategies which would include the management of this resource along with financial and other investments. Investment in Human capital integrates the overall growth of the organization. (Sujata Sahi, 2013)

To really capitalize the human capital organizations should not look only at the knowledge and abilities of the employee but also to the personality variables that the employee possesses. It requires that every employee is seen as "whole person" (Marty Martin, 2013) and not merely a bundle of qualifications and abilities. If organizations want that every employee should utilize all his capacity and commitment then it leads to a number of issues in management. For example, today, companies need all of their employees to be creative, which requires employees to be motivated, and to put their all into their work. But, how can a company foster that when work-life balance and burnout are becoming more of a concern?

Another challenge is the increasing complexity of the solutions/ products that a business needs to generate, as these tend to require collaboration. But, how can such teams develop a creative synergy that will capitalize on the much intelligence available? Moreover, both teams and companies benefit from diversity (cf., Jayne & Dipboye, 2004), and yet teams often devolve into "groupthink," and companies can have biases towards promoting certain "types" of people. Even when companies embrace the idea of diversity, they have difficulty bringing the requisite mind set and culture into the company. How can businesses and groups capitalize on their diversity? For that matter, what can organizations do to make sure that the right people get on board and stay with the company? What all of these questions have in common is that they are trying to go beyond fixing problems and into promoting excellence. It is precisely because of this perspective that the business world needs to turn to the branch of psychology that deals with human flourishing and human strengths, namely positive psychology (Donaldson & Ko, 2010; Seligman & Csíkszentmihályi, 2000).

POSITIVE POLICY ENVIRONMENT FOR POWER SECTOR

Electrical energy is the basic input for stimulating industrial and agricultural growth. The main task of the State Electricity Board is to generate, transmit and distribute energy within the state. So, the prime responsibility of both TANGEDCO and TANTRANSCO is to meet the energy demand of Tamil Nadu, which has a population of 80million, spread over an area of 130058 Sq. kMs.

As far as Tamil Nadu is concerned the pace of power development in the state was slow till the country attained independence. Power development as a state venture commenced only in 1927, after the formation of a separate department in the state Government for generating and distributing electricity. The successive five year plan however witnessed accelerated development. The State power sector has been witnessing progressive developments beginning with the enactment of Electricity Act, 2003, National Electricity Policy, 2005, Rural Electrification Policy, 2006, National Tariff Policy, 2006, Integrated Energy Policy, 2006, the Electricity (Amendment) Act, 2007 which all contribute to the growth of the sector including private sectors participation in generation.

INCREASING POWER CONSUMPTION

The demand for primary energy consumption as well as power has been growing in India post liberalization in line with high economic growth rates witnessed. The per capita electricity consumption stood as 704.2 kWh for 2008[1] (as per UN statistics). However, India's per capita consumption is still significantly less than the developed countries as well as major developing countries like China, Japan. As the country moves towards an urban industrialized economy, it is likely that energy demand may also increase significantly. The per capita consumption at the end of the five year plan (FY2011-12) is projected to be 1000 kWh (i.e., 1 unit / day). But, the per capita consumption[2] in Tamil Nadu is well above the National average which is given below.

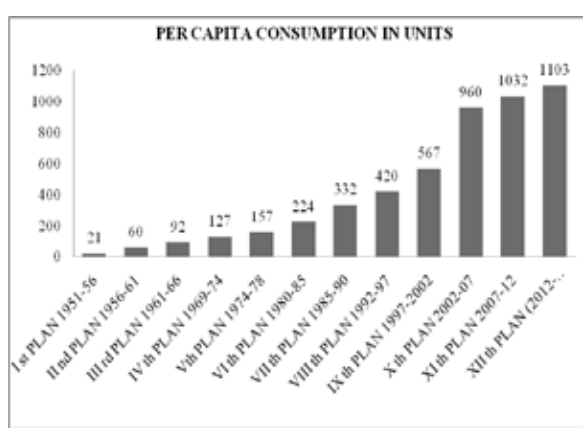

Figure 2. Per Capita Consumption in Units

POWER SUPPLY – DEMAND PROJECTION

The total power available with TNEB grew from 172 MW (during 1st five year plan) to 11884.44 MW (as on 31.03.14) [3] which includes TANGEDCO's own generation, share from Central Generating Stations, Private Power Projects meeting the energy demand of 243 lakhs of consumers which are detailed as below. The gap between supply and demand projections as on date is given as below:-

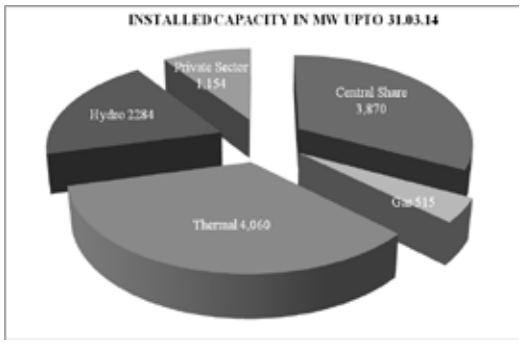

Figure 3. Installed Capacity in MW

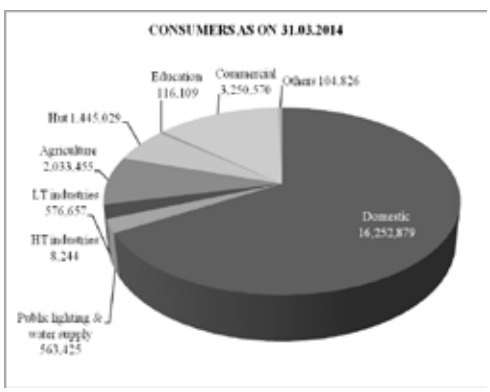

Figure 4. Consumer Database

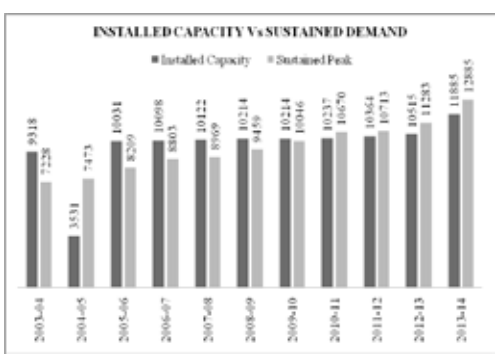

Figure 5. Installed Capacity Vs Sustained Demand

4. HUMAN RESOURCE REQUIREMENTS

The power sector is a capital and technology intensive sector requiring large number of man power such as Engineers, Technicians and other skilled workers. The power projects requires specialized technical man power during the project construction stage as well as at the time of Operation and Maintenance (O&M).The year-wise total manpower[5] is given as below.

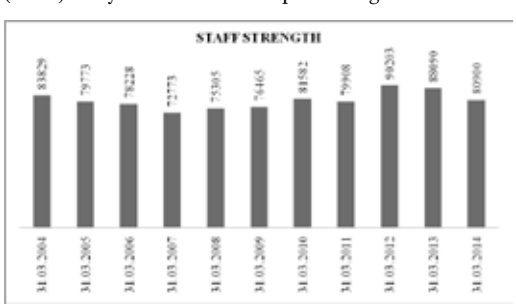

Figure 6. Staff Strength

TNEB is planning for massive capacity addition in the coming years which are detailed as below. Hence, it is likely that more man power needs to be inducted into this sector in areas such as Projects Planning, Projects Management, Projects Financing, Projects Commissioning, Operation and Maintenance & Transmission and Distribution of Electricity.

Sl.No.	Details of Projects	Capacity (MW)
	ON-GOING PROJECTS	
1	Mettur Thermal Power Project -Stage-III (1X600MW)	600
2	North Chennai Thermal Power Project-Stage-II (2X600MW)	1200
	UPCOMING PROJECTS	
3	ETPS Expansion Project(1x660MW)	660
4	Ennore SEZ STPS(2X660MW)	1320
5	Udangudi Supercritical TPP(2X660MW)	1320
	FUTURE UPCOMING PROJECTS	
6	Uppur TPP, Ramna(2x800MW)	1600
7	NCTPS Stage-III(1X800MW)	800
8	Cheyyur UMPP(5X800MW)	4000
9	Replacement of Ennore TPS(1X660MW)	660
10	Udangudi Expansion Stage-II(2X660MW)	1320

Table 1. On- Going and Upcoming TNEB Projects

TRAINING REQUIREMENT IN TNEB

Training requirements in TNEB includes mandatory training after induction, refresher courses for keeping the personnel updated and managerial training to build competencies. The induction level training requires significant time and investment as the newly recruited personnel's/ staff lack knowledge in Technical / Finance / Management. The National Training Policy (NTP), 2002, specifies training policies for the power sector. The NTP, is a key policy intervention to improve the training practices in the power sector. The NTP mandates that "Every origination in the power sector should have written Training Policy Document containing strategies to ensure training for all for a minimum period of one week annually for each employee". The NTP requires organizations to allocate adequate funds to training and development activities for meeting the stipulated training requirement. A minimum of 1.5% salary budget may be provided initially, gradually increasing it to a level of 5% depending on organization requirement.

TNEB have also evolved training policy and the objectives are as below:-

1. Make learning one of the fundamental requirements in TNEB.
2. Ensure value addition through training for overall efficient performance.
3. Institutionalize learning opportunities that supplement work experience.
4. Integrate organizational and individual development needs.
5. Enable employees to key abreast with the latest knowledge and skills and enable them to undertake current and future responsibility in a more effective manner.
6. Provide linkage between the different functionaries of training activity.
7. Provide linkage of training activity and overall human resource function.

6. KEY CHALLENGES

As the power industry grows rapidly, it faces challenges across TNEB. While the initial growth may be spanned by investment, timely execution and long-term performance would require addressing different challenges that the industry faces. The challenges range from attracting fresh talent to updating the skill sets of existing personnel, to bring about attitudinal and behavioural shifts and building managerial competencies. Improving

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the Training and Development infrastructure in TNEB.

The Directors of Training with its four major Institutes shall cater to the advanced training needs of all Executives and Non- Executives in Technical & Mangement needs of TNEB. The Directors of training will be the Apex Training Orgnisation and Nodal Agency for Training. It shall serve as Knowledge Dissemination Centre for TNEB as a whole. It is also engaging in research, consultancy and developmental activities.

STRATEGIES FOR DEVELOPING HUMAN CAPITAL

In energy sector, the most significant changes have been introduced in the power sector. There should be a sustained attempt at designing an appropriate policy to create human capital and competency in the electricity supply chain. This may be achieved by

1. Attract talent by showcasing opportunities, improving brand image and changing the work environment.
2. Expand training to cover behavioural & attitudinal changes.
3. Strengthen curriculum and develop certification standards.
4. Expand existing training facilities and create new infrastructure.
5. Ensure proper utilization of funds through direct payments.

8. CONCLUSION

It is important for TNEB to not just update Technical Skill of the manpower but should ensure all round development to ensure that employees posses the right skill, competencies and attitude to perform effectively in their Organizational Roles. While Technical Training is seen as essential, Personality and Soft Skill Development Programme should needs to be structured to match with the growing needs of the power sector.

Hence, it is recommended that a periodical Training Need Analysis (TNA) say once in Two years for evolving an annual need based training intervention agenda encompassing the following needs Technical Training and Skill upgradation, Personality Development, Organization Development Issues, Information Technology and Computer Skills to be conducted.

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