



# Manpower crunch in Energy SECTOR

IEMR analysed reasons for Human Capital Challenges in the Power Sector. Here are the findings

**I**NDIA'S energy sector has been growing rapidly and is expected to attract over 300 billion USD of investments during the current five-year plan. In the next 10 years, more power generation capacity is likely to be added than in the last 60 years. At an 8% annual growth rate, India would need an installed capacity of 220 GW by 2012 and 306 GW by 2017, against the current total capacity of around 150 GW. By 2032, the installed capacity required is projected to be almost five times the current capacity. In order to meet these requirements, the power sector requires augmentation of capacity across the value chain including equipment manufacturing, fuel resources, construction, project management and operations (O&M). While large-scale investments have been planned and a large number of projects are being launched, the lack of high quality human resources is becoming a key constraint. Most of the current trained manpower is being derived solely from a few public sector companies. There is a widely acknowledged need in the industry to attract and develop fresh talent to assume engineering, managerial and leadership roles in order to sustain the growth.

The total manpower in the power sector at the end of 10th plan was approximately 9.5 lakhs as per the Planning

Commission's Working Group on Power for 11th Plan. Even in a scenario where the employee productivity is projected to increase and a decreasing Man/MW ratio, it is estimated that at least five lakh technical manpower and another 1.5 lakh non-technical manpower needs to be inducted in to the power sector in the 11th and 12th plan periods, i.e., by 2017.

One of the key bottlenecks for ensuring adequate manpower for the sector is the lack of training infrastructure. As per the CEA (Central Electricity Authority) estimates, the infrastructure for Refresher Training required for upgrading skills and knowledge is just 3% of the required capacity. This is a key reason for shortage of manpower with adequate competencies. Further, there is large deficit in infrastructure for managerial training, the current capacity making up only 4% of the requirement. This has a significant impact in decision making capabilities of organisations. At a time when the sector is undergoing rapid growth amidst a changing environment, lack of managerial competencies hampers the ability of organisations to adapt and grow. To manage the growth in an effective and responsible manner, it is very important that managerial talent be adequately oriented in the commercial, social and environmental aspects of the industry.

Given these shortages, the sector provides tremendous opportunities for young professionals to grow into leadership roles as companies expand rapidly. The Power sector provides a wide range of opportunities across different levels of skills and aptitudes. While unskilled workers are primarily engaged in construction, the requirement for skilled workers includes engineers and managers apart from functional-support staff. In addition to the technical manpower, thousands of highly skilled managers are required in areas such as planning, project management, project finance, business to business marketing, contracting, project monitoring and review.

Moreover, with increasing focus on renewable energy, there is an opportunity to productively engage millions of people in harnessing Small Hydro, Bio-fuels, Solar and Wind resources, provided adequate training infrastructure is available. Other areas like energy efficiency, demand side management and power trading also require manpower with specialised training.

Traditionally, most business schools have been focussed on churning out management professionals trained in functional areas such as finance, marketing, operations and human relations. A few institutions, however, have taken the initiative to address the needs of the power sector, which requires significant domain knowledge. These include the Institute of Energy Management and Research (IEMR), Management Development Institute (MDI), National Power Training Institute (NPTI), University of Petroleum and Energy Studies (UPES), etc. For instance, IEMR's Their management programs follow a custom-designed curriculum that is a unique combination of general management education and energy sector focused managerial knowl-

edge, wherein students get a detailed understanding of the important aspects of the energy sector including conventional and renewable power. Based on interest and career aspirations, students at IEMR these schools can opt for domain specialisation in Power, Renewable Energy, Sustainability & Environmental Management and Oil & Gas. These programs are a good mechanism to enable experienced professionals from other sectors to make a lateral transition to the Energy sector, while helping new graduates build a solid foundation to pursue a career in this fast growing sector.

Private sector participation in Power has started accelerating only in the past 3 years and its increasingly significant role is summarised in the words of the Union Power Secretary, Mr. Harishankar Brahma, speaking at the inauguration function of IEMR, "Power sector is an emerging sector and by the 12th plan, the share of the private sector will increase to 55%-60%. As that happens, the private sector definitely requires large number of engineers and managers." The emergence of the private sector as the driving force for growth has the potential to revolutionise the power sector in the next decade in same manner as has been witnessed in the telecommunications sector over the past decade.

Young professionals entering the power sector can look forward to challenging roles and rewarding careers. They have the opportunity to enter a sunrise sector and grow quickly into leadership roles provided they bring the right mix of managerial skills, domain knowledge and attitude. Moreover, given the huge shortage of power in India, the power sector is not prone to economic downturns such as the one witnessed in 2008-09.

As per a recently published report titled "Human Capital Challenges in

the Power Sector", some of the strategies for creating human capital for the power sector are:

- Attract new talent to the sector by showcasing opportunity, improving work environment and providing growth opportunities.
- Introduce electives at graduate engineering programs and specialised programs at post-graduate level.
- Incorporate comprehensive all-round development programs into training plans for functional skill development while creating an appreciation for the commercial aspects of business.
- Utilise ITIs and other vocational skill development centres to provide steady stream of manpower for construction and operation of projects.
- Standardise curriculum and develop certification standards for skilled and semi-skilled roles and allow training institutions to provide employment oriented courses.
- Expand existing training facilities and create new infrastructure through incentives and encouraging independent service providers.
- Ensure proper utilisation of training funds through direct reimbursements.
- Create awareness on energy efficiency among all stakeholders and incorporate mandatory training for personnel involved in energy intensive processes.

Finally for the strategies to be successful and for development of the Indian Power sector, it is important for all the stakeholders to recognise the importance of developing human capital and invest in it. ■

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