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Skill Gap in Power Sector and role of Tata Power Skill Development Institute

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There are very few things which have changed the world the way Power has. Power (Electricity) is and will be a part of our lives for as long as mind can imagine. Come to think of it, a city dweller will have to take extreme efforts to disconnect with power totally, even momentarily. Such intimate is our relationship with Power.

Over 100 years ago, when the Power story was just beginning in India, Tata Power was standing behind the Nation as a pioneer in generating electricity through renewable source (Hydro) and bringing it to the doorstep of customers in Bombay (now Mumbai). Today, when the Indian Power Sector is faced with the new challenge of skill shortage, Tata Power has again picked up the baton to help the sector in addressing this looming challenge for competent talent equipped with required skills by establishing the Tata Power Skill Development Institute (TPSDI).

But in order to understand the solution to the problem, and what Tata Power is doing about it, it is important to deconstruct the problem first. The two important facets of this problem are - Economic and Social.

Let us understand the Economic aspect first. It is fact that India is one of largest economies of the world. The International Monetary Fund (IMF), in its World Economic Outlook Update in January this year, has estimated that the Indian economy would grow by 7.8 per cent in 2019, which will make the country the “World’s Fastest-Growing Economy” in 2018 and 2019, a title that it lost to China in early 2017. Apart from this, India has become one of the top destinations for foreign investment and is poised to become one of largest manufacturing countries of the world. This economic growth, coupled with the Government’s “Make in India” initiative, will lead to a huge spurt in industrialization, as a consequence of which, demand for Power will increase. The rural electrification projects under the Government’s Deen Dayal Upadhyay Gram Jyoti Yojna (DDUGJY) and PM’s Saubhagya Program to electrify over 4 crore households, and increasing per capita energy consumption will further add to the demand for Power. Extensive work has been done on estimating this demand. It is estimated that India’s Power generation capacity will more than double by 2027 (from 302 GW in 2016 to 640 GW in 2027). Point

to be noted is that about a third of this addition in generation capacity will come from renewable energy sources.

The economic health of the country gives the confidence that the country, along with the support from investors, will be able to provide for the infrastructure for this kind of growth in the Power Sector; However, **concomitant to this huge demand for additional Power will be the demand for additional skilled manpower.** It is estimated that the Power Sector will need additional 1.5 million skilled manpower by 2025. Meeting this demand for additional skilled manpower in the entire chain of Power Sector and downstream value added services will be a challenge for the sector. This situation is unfolding right now as we speak, not in some distant future.

The other aspect of the Power Sector’s skill shortage problem is social. The matter is of the Demographic Dividend of the country. Demographic dividend occurs when the proportion of working people of in the total population is high, which indicates that people have more potential to be productive and contribute to growth of the economy. 62% of India’s

population is in the working age group (15-59 years), and more than 54% of the total population is below 25 years of age. By 2020 the median age of Indian workforce would be 29 years which will make it the youngest country in the world. In the next 20 years, the labour force in the industrialized world is expected to decline by 4 per cent, while in India it will increase by 32 percent. Prima facie, this sounds like good news - an instant supply to meet the demand. However, one doesn't need to scratch too much below the surface to realize that this demographic dividend may well turn out to be India's demographic nightmare. The young people of India simply do not have the skills to take up the jobs that the growing economy will produce. It is estimated that only 4.69% of the total workforce in India has undergone formal skill training as compared to 68% in UK, 75% in Germany, 52% in USA, 80% in Japan and 96% in South Korea. A recent survey by the Pratham Foundation revealed that only 5% of youth in the 14-18 year age group take up some form of vocational training. In the same age group, the reading and numerical ability is much below the mark and over 40% could not even tell the time correctly. Only 64% were able to name the capital of the country correctly. 59% had never used a computer and 64% had never used internet.

The situation is no better in case of technically qualified youth. Newspapers have reported that only 7% engineering graduates are employable. More than 60% of the 8 lakh engineers graduating from technical institutions across the country every year remain

unemployed. 20% of about 7 lakh graduating diploma holders are employable, but do not find jobs.

The problem of low skills pervades the existing workforce engaged in the entire gamut of the Power Sector as well.

Therefore, cumulatively, the skill problem of the Indian Power Sector is that of high demand and low skills, creating a clear Skill Gap.

Of course, the Government is cognizant of this and has launched a massive campaign called the "Skill India Mission" to counter this problem. But, the Government efforts alone will not be enough, and the Private Sector will have to step forward to support the Government in effective deployment of this mission.

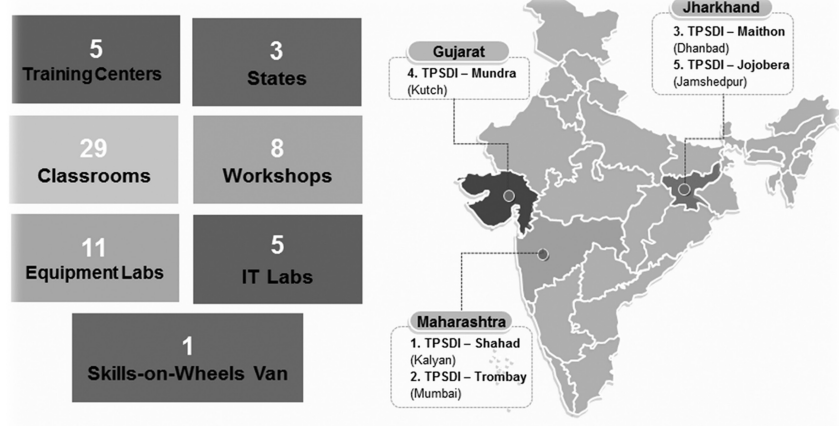
As a timely response to this problem, Tata Power has established the **Tata Power Skill Development Institute (TPSDI)** in February 2015, as part of its Centenary Year Celebrations. Through this Institute, Tata Power has taken upon itself to train up to 20% of the manpower required in the Power Sector by year 2025, which is very respectable percentage given

that Tata Power is just one of the many Private and Public players in the Indian Power Sector.

The Institute has opened its doors to everyone who meets a certain age criteria, and is interested in building a career in the Power Sector. The Institute caters to all types of learners in the Power Sector - from experienced technocrats to unemployed youth look for employable skills. The Institute also works with students of ITTs, Polytechnics and Graduate Engineering Colleges to bridge the gap between what the Industry demands and what the Academia pursues.

The Institute's vision is **"To be the Best in Class Technical Training Institute for Contemporary and Future Skills in Power Sector and Allied areas to empower people in a sustainable manner"**

TPSDI operates 5 state-of-the-art Training Hubs in the country - TPSDI Shahad and TPSDI Trombay in Mumbai, Maharashtra, TPSDI Maithon at Dhanbad, Jharkhand, TPSDI Mundra at Kutch, Gujarat and TPSDI Jojobera at Jamshedpur, Jharkhand.



The Institute provides modular training and certification across a wide range of employable skills, including skills in Thermal, Hydel and Renewable Energy Generation, Transmission and Distribution, as well as other skills found in the Allied areas. The skill domains include Electrical, Mechanical and Instrumentation.

TPSDI is a Training Partner of the Power Sector Skill Council (PSSC) and is also represented on its Governing Council. TPSDI is working closely with the PSSC on development of the Qualification Packs (QPs) and National Occupational Standards (NOS) for the Power Sector.

TPSDI's flagship Training Hub - TPSDI Shahad is spread over a lush green 10 acre campus and specializes in Power Systems skills and is perhaps a one of its kind leaning center given the kind of training set ups that have been installed there. It is a must-go destination for anyone who is seeking skill upgradation in Power System skills.

Training at TPSDI ensures holistic development of trainees. In addition to technical skills, training at TPSDI also focuses on other dimensions of skill building, such as – numerical ability, science, basic IT, industry orientation, communication, soft skills & personality development, and work ethics, and places special emphasis on Safety, Health & Environment (SHE) considering the hazardous nature of Industry. The training consists of both knowledge and hands-on skills.

Tata Power is proud of the fact that **within the 3 years since its inception, TPSDI has impacted over 26000 persons.** Presently, the Institute trains around 12-14 thousand people each year. The capacity will be increased to training 35-40 thousand people each year. The Institute will achieve this through a mix of in-person and virtual learning modes. The Institute is constantly enriching its content and improvising its training methodology, which will enable it to become an Institute-of-choice for all Power Sector training

needs at a National and hopefully even at International level.

TPSDI also doing a remarkable work towards advancement of Tata Power's CSR efforts in the area of employability. It imparts employable skills to unemployed youth and also assists them in finding suitable placements. For its CSR training, the major focus is on Dalits and Tribals, who constitute upwards of 40% of the total trained. TPSDI extends liberal financial benefits to the members of these communities in the form of fee concessions, priority in admission and residential facilities.

Tata Power wishes that more and more people avail the benefits of the Tata Power Skill Development Institute and invites members from the training and other fraternities in the Indian Power Sector to visit TPSDI Institutes and collaborate with TPSDI to raise the standards of skills in the Indian Power sector and to contribute to the Skill India Mission.



TPSDI Shahad, Mumbai