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### POWER INDUSTRY ARTICLE



WatchDog Transformer: One Solution for Many Issues



Article by RB Patel, Head, Gujarat Power Research & Development Cell, Gandhinagar



How to prevent electrical fires & failures caused by loose connections in electrical panels?



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Mr. RB Patel
Head, Gujarat Power Research

#### INTERVIEW

Good technocrats are highly required to run the power sector efficiently. Most of the decisions are taken by non-technical people whereas it's totally a technical sector. The power sector would be in a better position if the right decision would be in the right hand.



Power Sector in India has a very positive outlook at least for next 10 years driven by Renewable Energy, electrification of Railways network, expansion of Metro Railways & spending by GOI mainlyin TBCB Projects.

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Good technocrats are highly required to run the power sector efficiently. Most of the decisions are taken by non-technical people whereas it's totally a technical sector. The power sector would be in a better position if the right decision would be in the right hand.

#### What's your ideal or philosophy about the R&D?

The countries, who understood the importance of R&D have left the rest of the world far behind by implementing innovative concepts. Examples are before us, those who have concentrated on research activities and spent time and money have well established their status in the world.

R&D investments are key inputs in economic growth. The impact of this is proven on productivity, exports, employment and capital formation. Countries like China, USA, Japan, Germany, South Korea and so many others are investing billions of dollars in R&D activities. India's investment in R&D has shown a consistently increasing trend over the years.

Our Hon'ble Prime Minister Shri Narendrabhai Modi is very keen on innovations. If we want to make the Bharat "ATMANIRBHAR" (self-reliance), R&D activities are highly important for any of the organizations, state and country.

### • Please describe the GPRD Cell and its activities.

Gujarat Power Research and Development (GPRD) Cell is a research center for Gujarat Power sector. It has been established by the Government of Gujarat for Gujarat Urja Vikas Nigam Limited (GUVNL) and its subsidiary Companies namely GSECL, GETCO, and four DISCOMs i.e. DGVCL, MGVCL, PGVCL and UGVCL. GPRD Cell is working under GUVNL and is funded by the GoG through the GUVNL. The basic theme behind the establishment of the Cell is to provide the best customer service and reliable & quality power supply with high efficiency to the stakeholders of Gujarat. The Cell is governed by three layers of independent Committees. Since July 2017, The GPRD Cell has started its business at the research park of IIT Gandhinagar. The Engineers working in the cell are having a thorough knowledge of the power sector, its constraints and needs. Within a short tenure of three and a half years, the cell has initiated more than 130 R&D projects. Amongst, 30 R&D projects have been

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completed and 52 R&D projects are at the ongoing level in the field. Total Ten Patent applications have been filed for Intellectual Property Rights by the GPRD Cell.

## • Tell us about the awards, the Cell has received and Research Papers submitted by the Cell

Yeah...will say proudly that within a short tenure, the Cell has received 5 different National awards and also various Research Papers have been selected by the different national level platforms of the power sector.

### • What would be your strategy for the marketing of your R&D product?

We are thinking that to develop a new research product such as any tool, equipment, IT application, software, GPRD cell may need support from or contributions of any manufacturer from any private or Government Agencies / Institutes/ Firms/ Companies or Organizations, in the forms of their time, manpower, fund investment, technical as well as manufacturing support in the R&D process. In such cases, the publishing of the name of the Agencies / Institutes/ Firms/ Companies or Organizations shall be allowed as a co-partner for the newly developed product.

Apart from this, we are thinking to do the commercialization of this cell's R&D product with due permission of the Government authority that is in the pipeline. Revenue generated from the product will be helpful for the high level of R&D activities.

### • What is your approach to motivate and cultivate the talent in your GPRD Team?

I am following the "GPRD" theme to motivate and cultivate the talent in My GPRD Cell. GPRD means, "G"roup/"G"rowth, "P"romote/" P"latform, "R"ecognition and "D"iversification. Group/Growth - We know that a good growth

employee and good group's employee who loves to learn constantly is a valued asset of the organization. Redeploying them on a new assignment with appreciation keeps their expertise in-house which is helpful to the organization.

"P"romote/"P"latform - Every research is always a new initiative and has no predefined way to work on it. To promote the ideas that come from the subordinate's mind and to become a platform between the obstacle and achievement are driving forces of the Research.

Recognition-Best Research has many failures. So it is necessary to cultivate a positive mindset in the organization after failures. We need to express the positive feedback for the happiness of the employee in little success also.

"D"iversification-We know that each team member has a different mindset. Diversity in mind is an essential tool for the research. Diversification management is a strategic step in each research assignment. In our GPRD Cell, each member has a different specialty that is much useful in R&D.

And at last, each and every team member has full freedom to work. In any research activity, failure chances are more than success. The team members are given full moral support so that they need not worry about any failure. They are motivated in such a way that 1% success chance is tried to convert into 100%.

### • Role of GPRD Cell in " Make in India" program

"Make in India" is the best initiative of the Government of India. So many high-tech products available in the market which are either not manufactured in India or manufactured in India but there are technological dependency on other countries. We have to pay huge to other countries while its purchase, installation,

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commissioning and services for such monopolized products. GPRD Cell understands the actual requirement of the field and tries to develop customized product inhouse, which can be easily manufactured and utilized in India. All such products will be manufactured in India by our talented youth and it will definitely create new job opportunities in India.

#### What are the challenges you foresee in the Power Sector?

The power sector is totally a technical organization. Good technocrats are highly required to run the power sector efficiently. Good technocrats are available but freedom to take appropriate decision to run the business seems lacking. Technical decisions are taken by nontechnical people, this situation is a big challenge not only for the power sector but for so many other sectors also. Why R&D is lagging in India? Because technical organizations are headed by nontechnical persons and it is obvious that understanding of technical need of any organization would always be better with a technical person. Apart from this, RE integration

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would be a big challenge for grid operators in the scenario of huge RE injection.

#### How R&D activities are useful to strengthen the power sector and to improve customer satisfaction?

R&D products will replace the present routine time and money consuming practices. In case of power interruption, huge manpower and time are utilized, first of all to search out the fault. The R&D product will minimize or eliminate all these non-productive activities.

The R&D product will eliminate electricity theft in the system. Advance technology will improve the productivity of manpower with quality and accuracy. Power availability will increase. Customer services will become prompt. Increased greed stability with the increased injection of renewable energy will make the electricity cheaper.

All these will become possible with innovations only. And the GPRD is working to achieve all the above goals.

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