

# SPE NEWS LETTER

APRIL ,2020 | Issue No. 2/2020



## The Society of Power Engineers (India)

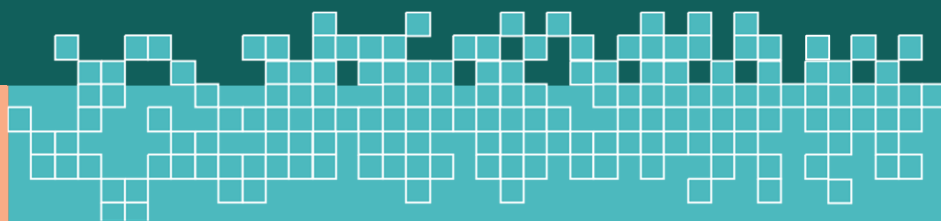
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BE HEALTHY, BE CLEAN



CLEAN & DISINFECT



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PICK-UP & DELIVERY



## CHAIRMAN'S DESK



Very recently Nitti Aayog has stated that present installed capacity of power generation in India has increased to 344 GW and its energy deficit has

shrunk to 1% in 2018 which was around 4% in 2014. India now ranks 26<sup>th</sup> in the World Bank's "Ease of Getting Electricity index" which is up from 99<sup>th</sup> rank in 2014. Aayog has also stated that in new and renewable energy sector, cumulative installed capacity has nearly doubled from 35.5GW in 2014 to about 70GW in 2018 (76.87 by February 2019). In solar energy sector the installed capacity is increased from 2.6GW to 22GW in the same period. An expert group has been set up by the Niti Aayog to assess the achievement of the first milestone of 175GW RE by 2022. It has expressed confidence that India is on track to achieve this target.

Even though the installed electricity generation capacity is significantly higher than the peak demand of 162 GW (January 2019), the country faces shortage of power in some of the states. The analysts and experts feel that this shortage is due to reluctance of DISCOMS in purchasing the power from generation companies which demand high price for energy produced, mostly by conventional energy sources. Some of the reasons for high prices are shortage of coal and unregulated price of imported coal, high transmission and distribution losses and inadequate infrastructure.

Large population of our country still do not have electricity at their homes.

Also, it is estimated that demand will increase more than double in 2022 compared to level in 2012. The government cannot rely on conventional source of energy alone and must increase sources from renewable energy. It is keen in solving this problem by generating the electricity by low cost, non-conventional sources of energies like wind, solar, biomass, small hydro etc.

India's achievable potential for Solar and Wind is 479GW and 410GW respectively as reported in 2015. To achieve this level, the government will be providing broad policy parameters, frameworks and budgetary provisions while industry needs to act and support this growth by public-private partnership. The government has also launched some schemes like installing one lac solar pumps, solar panels on water bodies thus reducing evaporation losses, solar roof-tops, waste to energy plants, sustainable electric vehicle (EV), hydrogen energy and fuel cells etc.

Distribution companies receive majority of their requirement of power from different generating stations in the country, by using convenient methods to harness the most economic sources of energy. With increase in renewable energy, DISCOMS will have option for utilizing this cheaper power to optimize the cost of energy they buy. India is seriously working proactively on scheduling and dispatch of generation resource in the country by optimizing inter-state generating stations. CERC and POSOCO have launched the pilot program for implementing this scheme which is one of the steps taken to ensure uninterrupted power at reasonable

price available to distribution companies.

The government has focused on sustainable growth in order to make the country energy-efficient within a specified time period. Individual can contribute to this growth by understanding and accepting these massive changes and using energy conservation practices and installing rooftops for their energy needs at

homes and offices. Society of Power Engineers (Vadodara Chapter) had organized and continue to organize many seminars and conference to spread the awareness in development in RE sector.

Thanking you,

**GV Akre**

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### **FROM EDITOR'S DESK**



**Dear Reader,**

Power is one of the most critical components of infrastructure crucial for the economic growth and welfare of a nation. The existence and

development of adequate power infrastructure is essential for sustained growth of the Indian economy. India's power sector is one of the most diversified in the world. Sources of power generation range from conventional sources such as coal, lignite, natural gas, oil, hydro and nuclear power to viable non-conventional sources such as wind, solar, and agricultural and domestic waste (biomass). Electricity demand in the country has increased rapidly and is expected to rise further in the years to come. In order to meet the increasing demand for electricity in the country, massive addition to the installed generating capacity is required.

Ujwal Discoms Assurance Yojana (**UDAY**) was launched by the

Government of India to encourage operational and financial turnaround of State-owned Power Distribution Companies (DISCOMS), with an aim to reduce Aggregate Technical & Commercial (AT&C) losses to 15% by FY19.

A new power sector scheme aimed at better infrastructure, smart meters, and a private franchisee model for improving power supply in states is likely to have an estimated capital outlay of Rs 2-2.5 trillion. The scheme will replace UDAY (Ujwal DISCOM Assurance Yojana), which concluded in March this year. UDAY did not entail direct grants from the Centre to states. This new scheme is likely to be called **ADITYA** — Atal Distribution Transformation Yojana — named after the late prime minister Shri Atal Bihari Vajpayee.

Faced with a demand slowdown and increasing financial stress of the distribution companies, the Centre is considering a new loan window for states to help settle their rising dues to the power generation companies.

Under the new plan, state-run lenders Power Finance Corpora-

tion (PFC), Rural Electrification Corp. Ltd (REC) and Indian Renewable Energy Development Agency (IREDA) would offer loans at concessional rates to DISCOMS to settle immediate needs of the generation companies and prevent any disruption in power supplies.

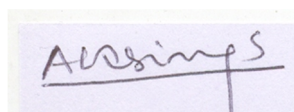
Power producers' total outstanding dues owed by distribution companies stood at Rs. 69,558 crore by September end 2019. This is an increase of 37% over the same month last year, reflecting stress in the sector. It is said that the new loan window will help GENCOS settle some of the dues that DISCOMS owe to them. This will enable them to maintain power generation at levels that did not cause any disruption in supplies across the country. To make the loan less painful for financially

stressed state DISCOMS, the lending institutions are expected to keep the interest rate closer to their cost of funds. This would be done by fixing interest rate on loans on a cost plus a nominal fee. To ensure that there is no further default on these bridge loans, the lenders would get a sovereign guarantee from the state government or open escrow account of one or more of its revenue streams with the lender.

We will be extremely happy to receive your views, opinions and suggestions.

Please feel free to reach out to us.

Happy Reading!



(AWADHESH KUMAR SINGH)

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## CHAPTER'S ACTIVITIES



➤ On **10 Jan 2020**, the **Chapter** joined hands with the **Institution of Engineers (I)**, Vadodara Local Centre for an event to felicitate **Er. Narendra Singh**, National President of IE(I). Er. NPS Brar, President of Vadodara local centre felicitated Er. Narendra Singh on his first visit to the city of Vadodara. In reciprocation Er. Narendra Singh thanked all the engineers present in the Vasvik Auditorium. He went on to give account of his career in Hydro-Electric Projects. He had spent most of his time in the Tehari Dam project including rehabilitation.

During the event **Dr. PS Modi**, Associate Professor, MS University of Baroda made a technical presentation on the topic of "**Constant VAR System Operation using Multi-Pulse Converter**". The speaker gave detailed account of Design of a Converter-system which affords constant VAR output disregarding the line voltage & current. Source Impedance is important for constant VAR which can be achieved by varying firing angle. Six-pulse convertor also affords constant active power. This advent of power electronics can work as a blessing to the Industry, but harmonic level has to be controlled. The lecture was well received.



➤ On **04 Mar 2020**, **SPE(I) Vadodara Chapter & IE (I), Vadodara Local Centre** jointly organised a lecture to celebrate "**The World Engineering Day**".

**Dr. Vijay Shah** of ABB-Vadodara spoke on the sustainable development. The speaker deliberated on the aspects of population growth all over the world during last century & growth of technology/science. He defined sustainable growth with reference to the quality life without much of impact on the environment. The internet, mobile phones have

brought the world closer. The new technology of Internet of Things (IOT) is going to change the definition of quality life & sustainable growth. The reduction in carbon footprints is the need of the hour. The Electrical Vehicles (EVs) are going to dominate the private & public transport systems. The presentation was crafted carefully & was praised by all the members present in the hall.

**SM Godkhindi**  
**Secretary**

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## **Obituary**



➤ **Er. SC Buch** (Retd. Chief Engineer GEB), passed away at Kisumu, Kenya on **13 Feb 2020**. He was 91 and staying with his daughter at the time of death.

He was a Life Member of SPE (I) Vadodara. He was also an active member of GEB, Retired Senior Engineers' Forum & past President as well.

Born in 1929, he obtained degree in Electrical Engineering in 1957 from LE College, Morbi. During his tenure in GEB he worked in various capacities and retired as Chief Engineer. His contribution towards establishment of Power Line Carrier Communication, the **FIRST all India PLCC Grid** at GEB covering the whole state of Gujarat was remarkable. He

linked all the Power Stations and important Sub-stations with PLCC when the communication in the country, was monopoly of one department only. Moreover, he also established an important Hotline with first Atomic Power Station of India at Tarapur via LDC-Jambuva. He has contributed a great deal in the power system of Gujarat state in 70s & 80s. May God give peace to the departed soul & give strength to his family members to bear the impact.

➤ **Er. HD Tilwani** (Retd. Deputy Engineer GEB), passed away on **03 Feb 2020**. He was a Life Member of SPE(I) Vadodara Chapter. He was omnipresent in all the event organised by SPE(I) Vadodara.

May God give peace to the departed soul & give strength to his family members to bear the impact.

## PROFIT



"PROFIT" isn't a buzzword nowadays in all contexts of life?

Whether it a business or a job or even in social life. Profit may be monetary or non-monetary; we can call it a benefit. But profit and benefit are very important aspects of everybody's life.

At present we talk about profit for the business world. The ultimate goal of existence and start-up of any organization is profit, apart from other motives. Whether it is a privately owned organization, public holding corporate or government organization. Even an NGO is also intended to have a certain amount of profit to sustain and enhance welfare activities.

No need to explain that profit can be increased by a reduction in input cost and by increasing sales or service price. But in the current global competition and in the era of the buyers' market, is it easy to increase the price? It is a great challenge faced by all businesses.

The only way left behind is a reduction in input costs. Here there is a huge scope of reducing cost just by keeping a critical eye on utilizing all the business resources optimally. Focus on optimum utilization and not on maximum utilization. This may include your business resources,

human resources, and your own real potential.

Have you ever checked the utilization of following scarce resource? Have you ever checked that the following can be utilized in a more effective way without compromising on other factors of the product or services?

- Material
- Machine
- Manpower
- Money
- Time
- Data
- IT (Information Technology)
- Your own true potential

Again, in each of the above resources, there is a wide scope of improvement just with active participation and involvement in the process.

Why Chinese products are cheaper than ours? Why Japanese technology and products are more reliable? The answer is the full utilization of one's true potential. I worked with many Japanese people very closely and hats off to their dedication towards work and respect to their nationality.

I personally believe, if, all of our citizens whether entrepreneurs or employees, utilize their own true potential, we can definitely have better and cheaper products that too with increased profitability. In any case, the increased profitability of the organization directly or indirectly affects all the stake holders.

Because of space constraints, all the aspects of profitability are not presented in detail, but I recommend everyone to check their own potential. Are you really doing the task as per your expertise and capability? Can you handle more critical tasks and delegate less important ones to your teammate? How often you are being messed with multiple tasks? Is it challenging to decide the priority of the pending task? There are many

pros. You have to select only the task wisely those cannot be handled by others as efficiently as you.

According to my experience, the appropriate allocation of different portfolios and tasks to the right kind of people with a clear guideline is equal to winning half of the battle.

**Mrs. Darshana Thakkar** is a Founder and profit consultant of Transformation.

**END**