



The Institution of Engineers (India)

U.P. State Centre

IEI NEWS

"97 Years of Relentless Journey Towards Engineering Advancement for Nation Building"

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Vol. XXVI

ISSUE: 7-8

July-August, 2017

From Chairman's Desk



Dear Eminent Engineers

While writing this column I am deeply distressed of the Railway accidents happened within the week. As an Engineering fraternity, we are not only responsible for any project which should be completed in time with permissible limits of quality to let the country prosper and develop, but also to maintain it properly at desired interval of time. This was a pious month for Indian freedom when we celebrated our 71st Independence Day on 15th Aug of this month with full fervor and enthusiasm but on the other hand so many men, women and children lost their lives and lives of their kith and kin because of irresponsible maintenance of the Railway Tracks. It is observed that in every accident there is violation of the provision of Act & Safety codes. In this 21st century we are equipped with remote sensing and control technology and thus it is the responsibility of the entire engineering fraternity to visualize the challenge before us to save the human life even after the possibilities of minutest human errors in the field.

On the technical side regarding activities at the center, we organized a one day seminar on "Potential of Green Energy in India and its Harnessing Plan", in which 8 papers were presented by the specialists in their field and we arrived at the conclusion that we should harness the huge available Solar Energy in our country and make the National Solar Mission, a success. A detailed report of the seminar has been given place in this volume. The forthcoming events, to be held at the center, are also given below and I once again request your active participation in the forthcoming events. Accept my greeting for Id-Ul-Zuha, Mahashivratri, Durga Navmi and Vijya Dashmi festivals in the month of September.

**Prof. (Dr.) Bharat Raj Singh, FIE
Chairman**

Forthcoming Events at IEI, U.P. State Centre

Sl.No.	Date	Event
1.	Aug. 25, 2017	Lecture Meeting Topic : 'Satellite Navigation in Indian Perspective'
2.	Sept. 15, 2017	Engineers' Day
3.	Sept./Oct. 2017	One day Seminar on Electronic Waste
4.	Oct. 2017	One day Seminar on Solid Waste Management
5.	Oct./Nov. 2017	Engineering Intervention for enhancing profitability of Sugar Cane farmers
6.	November 18-19, 2017	All India Seminar on Sources of Planet Energy, Environmental and Disaster Science : Glacier Melting & its Challenges (SPEED-2017) in association with SMS Lucknow.

Report on 'Potential of Green Energy in India and its Harnessing Plan'

The Institution of Engineers (India), UP State Centre organized a One Day Seminar on 'Potential of Green Energy in India and its Harnessing Plan' on 23rd July 2017 at the UP State Centre, Lucknow. The Chief Guest, Er B.S. Tiwary, Director (Technical), U.P. Rajya Vidyut Utpadan Nigam emphasized the need of switching over to green energy. He said that due to increasing emission of Green House gasses in producing energy by fossil fuel the environment temperature is increasing and it is expected to rise by about 3^o C by the end of the century resulting into melting of Glaciers and ultimately rising of sea levels by 2 feet. He further added that the rise in temperature will not be uniform which may convert the useful land into deserts, and may submerge vast habitat Land and so green and clean energy is not only a slogan but it is need of the hour.



Keynote Speaker Mrs Varalika Dubey addressing the gathering

The Convener Er. V.B. Singh told that the Govt. of India has fixed the target of generating 1.75 lakh MW of Green energy by the year 2022 which will include 1lakh MW Solar, 60,000 MW Wind, 10,000 MW Biomass & 5000 MW small Hydro Power. He also inform that green energy production is not only cheaper than the conventional energy but also do not pollute the environment. Dr. Bharat Raj Singh, Chairman of Centre welcomed the delegates & also presented his paper on Wind Energy. Following eight eminent engineers presented their paper in the seminar.

1. Keynote Speaker Mrs. Varalika Dubey, Chief Engineer UPPCL said that there is great potential of Green Energy in the Country & we should harness it in a big way. She informed that the rate of Solar power have also come down to Rs2.44/paise per unit which is lesser than thermal Power and so one must

install the solar energy system at the roof top of the building.

2. Dr. Bharat Raj Singh, Chairman UPSC & Director General, School of Management Sciences (SMS) presented his paper on 'Wind Energy' and said that till date we are producing only 1080MW wind energy against expected one lakh MW power. He also informed that cost of wind energy is between Rupees two to two and a half per unit, which is cheaper than the available conventional energy.
3. Dr. Rajeev Chauhan, IIT Mandi, Himanchal Pradesh emphasized the need of establishing D.C. Microgrid for Green Energy to avoid using converters.
4. Dr. Pankaj Gupta, School of Management Sciences (SMS) presented his paper on 'Bio-diesel' and informed that the production of 'Bio diesel' has been started in our country.
5. Er Sudhi Raj Verma Alumni of IIT Kanpur spoke on the reasons why we will not be able to achieve the renewable energy target by 2022. He deliberated in details the challenges and opportunities for the Govt. as well as an entrepreneur.
6. Er M.P. Sharma, Visiting Professor K.N. Modi, Technical Institute, Modi Nagar gave an overall view of Solar, Wind, Biomass and other renewable energies, their potential and harnessing.
7. Er Ram Kumar, Sr. Project Manager of New and Renewable Energy Development Authority (NEDA), UP presented his paper on Wind Energy and elaborated about the effect of Air velocity, density and height of the tower on generation of Wind Power.
8. Er A K Singh, Retd. Chief Engineer UPPCL also expressed his views on Solar and Wind Energy.



A view of gathering

From the presentation by the eminent engineers it was concluded that in the process of being a fast growing developing country we are not in a position to full fill the requirement of energy by conventional energy sources. Not only our country but the whole World is bound to develop cost saving and environmental friendly alternate energy sources to avoid the reverse class of human civilization back to the old age and we are not behind the other countries in the development of alternate energy sources. India is targeted 20000MW Solar Energy production by the year 2022 under

National Solar Mission and in this process we have installed world's biggest power plant of 1000MW in Kurnool (Andhra Pradesh). Gujarat, Rajasthan, Tamil Nadu, Punjab, Madhya Pradesh are the leading states in this field. Not only big projects are being taken up but 1KW to 1000KW capacity solar system are also being installed at the roof top of Residential, Commercial and even Small Factories. Central Govt. has announced a subsidy of 30% for taking loan from nationalize bank for installation of solar system. Even RESCO Model has also been announced in addition to subsidy for those who do not take loan. In this model the companies will install the solar system at the roof top at their expenses and will charge for the energy generated/used on monthly basis. For villages 50 watt to 500 watt small systems are also available in the market. Solar pumps and solar street lights are used in many villages now a days. In cities like NOIDA, Aligarh, Ghaziabad, Kanpur use of solar energy is growing rapidly. AMU is the first University to use 5MW solar system. Easy cleaning process of solar panels and 3 to 5 years warranty on batteries has also made the use of solar energy easier and cheaper too.

The Seminar concluded with a vote of thanks by Er R K Trivedi, Hony. Secretary.

Report on Independence Day

The Institution of Engineers (India), UP State Centre, Lucknow celebrated the 71st Independence Day with full fervour and enthusiasm on 15th August 2017 at IEI premises. The flag was hoisted by Dr Bharat Raj Singh, Chairman of the Centre.



A view of flag hoisting

He informed the vast gathering about the development in various fields. He paid homage to the martyrs during the freedom movement as well as to martyrs in saving the country from invaders and terrorists. Every one present in the ceremony took New India pledge as to build a new India by the year 2022 towards a Clean India, Poverty free India, Corruption free India, Terrorism free India, Communism free India and Caste free India. The celebration ended with distribution of sweets and a vote of thanks by Er R K Trivedi, Hony. Secretary.

News from Head Quarter

NATIONAL DESIGN AND RESEARCH FORUM

NOMINATION FOR NATIONAL DESIGN AWARDS-2017

National Design Research Forum (NDRF) established by the Institution of Engineers (India), promotes Research, Design, Development, Productization and Innovation through collaborative effort since 1969. NDRF is anchoring inter-disciplinary technological research in many engineering disciplines including for societal applications, and plays a major role in deploying engineering and technology services, systems, and solutions for nation building.

The recent activities at NDRF include initiation of the Follow-On Program of NP-MICAV, National Program on Unmanned Marine Vehicles. We are the participants of National Program on Cyborgs led by SITAR. We are exploring various applications of UAV/MAV including Agriculture, Mining, Disaster Management, Power line Inspection etc. We have built the domain expertise and the infrastructure required to participate in research programs in Micro and Nano Systems, Biosensors, Tissue-engineering, 3D Printing, Systems Engineering etc. The Rapid Prototyping Laboratory-ProtoLab has the state-of-the-art equipment to promote innovation in design and development. The Simulation Facility setup at NDRF is being augmented to support engineering design across disciplines through technologies such as Virtual Reality, 3D Visualization, Real-time Simulation Systems, etc.

These activities and facilities of NDRF are open to industry, academia and research organizations for collaborative research and development. Currently, we have a consortium of 40 including various R&D Labs, industry, academia and research organizations.

NDRF continues the tradition of identifying and recognizing outstanding contribution to engineering design through the National Design Awards since its inception. We request you to nominate outstanding engineers contributing to design for the 2017 edition of these prestigious awards. Details and the Nomination Form for all the seven categories of Awards are available at www.ndrf.res.in. Your nominations should reach the undersigned on or before **05 October 2017**.

The Awards for the year 2017 will be presented at the 32nd Indian Engineering Congress, during December 2017.

We look forward to your association in NDRF's programs of national importance, and seek nominations for the Awards for the year 2017 from your esteemed organisation.

Please use the following link to download application form.

Student Membership (SMIE) – New Grade for Undergraduate B.Tech Students

The Council at its 689th meeting held at Ahmedabad approved a new grade of membership – Student Membership (SMIE) - meant for undergraduate students pursuing BE/B.Tech (AICTE approved) or equivalent qualification,

completion of which will make them eligible for Corporate Membership. The salient points regarding this new membership grade are given below: Benefits of Student Membership (SMIE): a. Student Members (SMIE) are entitled to enjoy following benefits regarding IEI journals:

- Make free e-access by logging in through www.ieindia.org
- Can avail the journal hard copies at a concessional rate.
- Student Members (SMIE) may access the IEI Library (Sir R N Mookerjee Engineering Information Services Centre) at the headquarters as well as State and Local Centres of IEI.
- Student Members are entitled to receive the monthly colour tabloid 'IEI NEWS' free of cost.
- Opportunity to participate in technical events e.g. Seminars, Symposia, Conventions, Workshops etc. organized by various IEI centres at State, National and International levels at concessional rate.
- Student Members may avail the opportunity of staying in any of the IEI guest houses.
- Student groups consisting of SMIEs only will be given preference in release of grants for their final year project/thesis work.

Validity of Student Membership (SMIE): Student Membership is a Non Corporate Membership and will be valid for six years w.e.f. the date of enrolment. Student Membership fee:

Fee for Applicants from India/Nepal	Fee for Applicants from SAARC Countries	Fee for Applicants from any other Countries
Rs. 1500	US\$ 88	US\$ 150

The application proforma is already available at IEI website at the URL: <https://ieindia.org/membership1.aspx>. In case of any further query regarding Student Membership (SMIE) please contact: (033)40106248 / (033)40106246 / (033)40106268 / (033)40106251 or email at: dibyendu.bhowmick@ieindia.org

The Institution of Engineers (India) ELECTION

It is informed that the Council at its 691st Meeting held on 25-26 September, 2016 at Haridwar has decided that the candidates who desires to contest in the elections of the IEI shall deposit the following non-refundable earnest money:

- Election to the Council Seat Rs.10,000/-
- Election to the State Centre Committee Rs.5,000/-
- Election to the Local Centre Committee Rs.3,000/-

The candidate shall deposit the money by a demand draft

drawn in favour of "The Institution of Engineers (India), payable at Kolkata to the Convener, Board of Scrutineers, Subsequently, the Honorary Secretary of the Centre shall forward the demand draft to the Headquarters office for depositing into the IEI Headquarters account.

Yours faithfully,
Maj. Gen. (Dr) S Bhattacharya, VSM (Retd.)
Secretary and Director General

Northern Zone IEI Alumni Association Meet

IEI Alumni Association in collaboration with IEI Delhi State Center is organizing first Northern Zone (Delhi, Haryana, Himachal Pradesh, Jammu & Kashmir, Punjab & Chandigarh, Rajasthan, Uttarakhand, Utter Pradesh) Alumni meet at Delhi on 3-Sep-2017. A.M.I.E. members interested in attending the meet may contact Mr L.P. Sivakumar, Joint Secretary, IEI Alumni Association, Bangalore. Mob: 09886049096.

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