

**International Exhibition cum Conference “GRIDTECH 2007”
on New Technologies in Transmission, Distribution, Load Dispatch &
Communication**

Welcome Address by Dr. R.P. Singh, CMD, POWERGRID

(5th & 6th February , 2007)

Dr. V. Krishnamurthy, Chairman, National Manufacturing Competitiveness Council, Shri Anil Razdan, Secretary (Power), Distinguished guests, delegates, Media representatives, Ladies & gentlemen. It is indeed a great pleasure to welcome you all on the occasion of inauguration of International Exhibition & Conference “GRIDTECH 2007”. I am grateful to Dr. Krishnamurthy and Shri Razdan; who in spite of their busy schedules, took out time to be here.

Friends, Electric Power in one’s life has assumed importance next to Food, Shelter & Clothes, particularly with the advent of the digital era. Therefore, the power fraternity has to ensure supply of reliable & quality power. In short, objective of power utilities could be described in four words “SQRA”.

There is a general belief, the world over that, supply of electric power could be met through addition of generation capacity. However, we must appreciate; supply of electricity is akin to the functioning of a human body i.e. *Heart (generation), Main arteries (main power grid), Sub-arteries (Sub-transmission), Capillaries (distribution), Brain (load dispatch centers), Nerves (dedicated communication)*. The two important functional parameters of a human being i.e. *B.P.* and *heart beat* are nothing *but voltage and frequency* of the power system. Thus, all the organs of power sector, namely, Generation, Transmission, Distribution, Load Management & Communication; need to be given equal importance to ensure healthy growth and functioning.

However, if we look at the investment made in T&D, it is far below the generation investment, particularly in developing and under developed countries. It is envisaged that global investment in power sector. In next 30 years would be of the order of 10 Trillion US \$, of which 5.5 Trillion US \$ would be in T&D. As far as India is a concerned, investment in T & D so far is 30 % as against a norm of 50% of total invested in power sector. In this contest, I would like to quote John Kennedy:

*“ Our task is not to fix the blame for the past,
but to fix the course, for the Future.”*

This Conference has been organised with the above objective, and as to how to quicken and economies investment in the long run through deployment of new technology in T&D. And also, to address other major challenges before the power utilities, namely climate change, conservation of flora & fauna and energy resources.

In India energy resources are pocketed i.e. hydro in North & North East, coal in East. Where as the load centers are spread across the country, it is a must to establish integrated, strong, vibrant and reliable transmission network across the country. POWERGRID, in this direction, has established a network of Extra High Voltage Transmission Lines of 60,000 Ckt.Kms. with a National Grid of 11,500 MW; which would be progressively increased to 150,000 MW by the year 2030, when our generation capacity would be 800,000 MW. The investment requirement for the purpose would be huge and bulk of power has to move from one region to the other, and off & on switched amongst different regions depending upon seasonal variations. This calls for, in addition to establishment of robust transmission system, a reliable load management system.

The challenges before power system engineers are enormous and it calls for different approach all together. Complex problems will therefore require innovative and practical solutions. It is pertinent to quote Einstein in this context

“The significant problems we face cannot be solved at the same level of thinking we were at when we created them. You must think new, higher, bolder thoughts to manage the change that is bombarding your organization in these topsy-turvy times. You need to become good at tolerating ambiguity and uncertainty. You must embrace the change.”

Accordingly, POWERGRID has planned to adopt hybrid Ultra High Voltage Transmission System comprising of 800 kV / 1200 kV AC systems & \pm 800 kV HVDC as well. Adoption of such high voltage system would also call for extra attention specially to address the serious issues of ROW, stability of the system as it is fraught with associated problems of grid management due to challenges of reactive power management and the dynamics involved in system operation, including the rise in fault level. POWERGRID has also planned to upgrade & uprate the existing Transmission systems and deploy efficient equipment in Transmission & Distribution to reduce losses.

To cater to such a complex transmission system, we are planning to switch over to Load Dispatch Centers having features such as adoptive islanding, self-healing, automatic demand / generation management, Wide Area Monitoring System (WAMS)

etc. Lot of work is being done internationally in this area through a Group of Very Large Power System Grid Operators of which POWERGRID and particularly myself is the founder member.

POWERGRID is committed to make all-out efforts to play a global role in innovation and adoption of new technologies to mitigate the challenges in the T&D sector. GRIDTECH which is being launched today will play the role of a catalytic agent in effort. In this context I would like to quote Churchill who rightly said:

“ As long as we have faith in our own cause and an unconquerable will to win, victory will not be denied to us”.

In the end I would like to welcome once again Dr Krishnamurty, other dignitaries and you all present here on the historic occasion of Lunching of GRIDTECH.

Thank you all.

Jai hind, Jai POWERGRID.