Profile of Shri A. Balan, Member (Planning), Central Electricity Authority

- Shri A. Balan is holding the post of Member (Planning) in Central Electricity Authority (CEA) since August, 2021. He is having more than 31 years of experience in power sector.
- He graduated in Electrical & Electronics Engineering from College of Engineering, Guindy, Anna University, Madras.
- **PSTI:** He joined CEA in 1990 (CPES-1988) at its Bangalore office – Power Systems Training Institute (PSTI). There he was associated with capacity building programmes of State Electricity Board engineers and worked in Communication division, Despatcher Training Simulator (DTS), and Computer divisions. He coordinated various training courses - Power & Telecom Coordination Committee, Communication in Power Systems, Despatcher Training Simulator, Computerised Load Despatching System, Computer Applications to Power, Power System SCADA & EMS, Power System Studies, Computer Basics for Engineers, Object Oriented Programming in C++, and Database programming (with Oracle & Visual Basic). Further, he managed/maintained PCs in office & computer laboratory with various hardware & software (i.e. Unix, DOS, Windows, networking, compilers & applications). He lectured (followed by laboratory classes) on topics - PC Hardware & software, FORTRAN-77 programming, Graphics programming in C, Object Oriented Programming in C++, and ActiveX Data Objects programming for Oracle & Visual Basic. At PSTI (now under NPTI), he developed many computer applications and published a paper on 'Web-enabled Load Flow' in a national-level seminar. He designed & developed PSTI's first website for publishing training course details.
- **RIO (West):** In 2004, he was posted in Regional Inspectorial Organisation-RIO (West), Goa and later at its Mumbai office. He extensively travelled for carrying out initial/periodical statutory electrical safety inspection in accordance with Indian Electricity Rules-1956. He inspected & certified central government owned/controlled HV & EHV electrical installations (i.e. generating plants, transmission lines, and distribution/industrial substations) in Western Region covering Maharashtra, Gujarat, Madhya Pradesh, Chhattisgarh, Goa, Daman & Diu, and Dadra & Nagar Haveli. He developed first website for RIO, Goa (West) containing information such as inspection procedure, checklist, fee details, downloadable application forms, etc.
- **SETD:** After promotion as Director, he joined System Engineering & Technology Division (SETD), CEA, New Delhi in 2008 and there he involved in the work related to designing EHV substations for J&K.
- **RIO (South):** Then, he worked for 3 years in RIO (South), Chennai as Superintending Engineer and functioned as Electrical Inspector in Southern Region covering Tamil Nadu, Andhra Pradesh, Karnataka, Kerala, Puducherry, Andaman & Nicobar Islands, and Lakshadweep Islands. He carried out statutory electrical inspection in accordance with Indian Electricity Rules-1956 / Central Electricity Authority (Measures relating to safety and electric supply) Regulations-2010. During inspections he used to create awareness among electrical contractors, supervisors, wiremen, site engineers, managers and utility owners about the safety of electrical installations. Since the year 2012, he is delivering lectures at PSTI on CEA's Electrical Safety Regulations.

- **SRPC:** He worked as Superintending Engineer for 3½ years in Southern Regional Power Committee (SRPC), Bangalore heading Operation division and Protection division. He devoted considerable amount of time in creating quality minutes of the meeting/reports with illustrations. He undertook field visits for protection audit & investigation of power system faults at substations. He developed computer applications in C# for automating routine jobs such as daily report, weekly report and protection trip report in order to save lot of time in preparing reports.
- **KRMB:** He was promoted as Chief Engineer in 2015 and posted as Member (Power) in Krishna River Management Board (KRMB), Hyderabad for handling inter-state power sharing issues with reference to Andhra Pradesh state re-organisation act. He actively involved in investigation & selection of telemetry (SCADA) locations for water level & flow measurement at various dam sites and canals in Krishna river which included lot of field visits. He developed a computer program in C# and tried to address the issue of power sharing from hydro power plants. With meticulous effort, he also developed Google Earth maps for pictorially depicting the river water dispute tribunal awards for both Krishna and Godavari river basins.
- **WRPC/SRPC:** Subsequently, he functioned as Member Secretary, Western Regional Power Committee (WRPC), Mumbai for two years (2017-2019) and Member Secretary, Southern Regional Power Committee (SRPC), Bangalore for two years (2019-2021). In RPCs, he was handling/resolving regional & inter-state power system operational/ commercial /protection issues in accordance with Electricity Act / grid code / rules / regulations by conducting regular & special meetings and field visits. At RPCs, he involved in the following activities at regional level: Power supply position, Annual outage plan of plants/lines, Load Generation Balance Report (LGBR), Monthly availability certification of transmission lines, Voltage control measures, Regional Transmission Planning, Automatic Generation Control (AGC), FGD implementation, Design/Review of Islanding systems, SPS implementation, Protection Trip analysis & remedial measures, Implementation of Under-Frequency Relays (UFR), Implementation of grid-disturbance enquiry committee recommendations, Commercial accounting (regional energy accounting (REA), Reactive energy accounting, DSM, etc.), Metering issues, Settlement of payment issues, Power System Development Fund (PSDF) projects by State utilities, Renewable Energy integration issues, Power System Stabilizer tuning, Pavagada Solar Park (2050 MW) scheduling & dispatching issues, SCADA issues, and Outage plan for SCADA communication elements. At WRPC, he developed a functional framework based on SQL Server & ASP.NET application for viewing the database of protection relay settings.

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