

Profile of Engr. Md. Muzammel Haque

- Engr. Md. Muzammel Haque, has been working as the Chairman of Bangladesh Atomic Energy Regulatory Authority (BAERA) since January, 2020. He previously served as a Chairman of Bangladesh Atomic Energy Commission (BAEC) and Member of Bangladesh Atomic Energy Regulatory Authority.
- Engr. Haque graduated from Bangladesh University of Engineering & Technology (BUET) in 1977 in Civil Engineering and joined at BAEC in the same year. He received extensive trainings in various fields of nuclear technology during his long professional career.
- **Professional field of specialization:** Planning, Design and Implementation of Engineering Infrastructures for Nuclear, Radiation and Other Facilities; Management of Various Activities of Nuclear Power Plant (NPP) Project; Regulatory Aspects of NPP, Radioactive Source and Radiation Facilities; Nuclear Safety, Security, Safeguards and Radiation Protection; Radioactive Waste Management and Irradiation Technology etc.
- **Major fields of his trainings include:** CPM in Project Management (1983); Quality Assurance Principles for Nuclear Power Plant including NDT (Jointly by IAEA & BAEC, 1988); Nucleonic Instrumental Technique in Civil Engineering (IAEA, Japan, 1988); General Non-destructive Testing Practices and Methods (Jointly by IAEA & BAEC, 1990); Food Irradiation Engineering, Moscow (IAEA, former USSR, 1990) and Germany (2010); Nuclear Power Pre-project Activities and Manpower Development includes demonstration on full scale and compact nuclear power plant simulators, visits to NPPs and manufacturing plants to see reactor pressure vessel manufacturing (IAEA, Korea, 1991); Non-destructive Testing of Concrete (Jointly by IAEA & BAEC, 1997); Radiation Protection & Radioactive Waste Management in PINSTECH, Pakistan (2001) and Austria Research Centre, Vienna, Austria & Iran Atomic Energy Commission (2003) by IAEA; Physical Protection System (PPS) for Nuclear Material & Nuclear Facilities at KINS, Korea (IAEA, 2008) including visits to NPPs to have experience on PPS; Project Management of Nuclear Power Plant Construction in Central Institute for Continuous Education and Training in Moscow including visit to Leningrad NPP (IAEA, May-June, 2011); Security of Radioactive Sources and Physical Protection System of Nuclear Facilities and Materials at PNNL, US Department of Energy (DoE) in Seattle, USA (August, 2011).

Service Records:

(i) In Bangladesh Atomic Energy Commission (BAEC):

- Assistant Engineer (1977-1982); Senior Engineer (1982-1988); Principal Engineer (1988-2002); Chief Engineer (2001-2008); Director, Engineering Division (2008-2009); Member, Engineering (2009-2011); Chairman (06 April, 2011-23 August, 2011);
- Served BAEC in different capacities including Member Engineering, and Project Directors of several projects of BAEC like the “3 MV Tandem Accelerator Project”, “BAEC HQ Project”. Was directly involved in building up infrastructures at Atomic Energy Research Establishment (AERE), Establishment of the 3 MW TRIGA Research Reactor facility with GA, USA; Central radioactive waste management and storage facility; 350 kCi Cobalt-60 Irradiator facilities with Germany, Nuclear Medicine Centers; 120 kCi Cobalt-60 Irradiator facilities with former USSR & IAEA.
- Actively participated in the feasibility study of Rooppur Nuclear Power Plant (RNPP) project carried out by Lahmeyer International, Germany & Motor Columbus Switzerland during 1987-88. Profoundly contributed in the implementation of “Accomplishment of Essential Activities to Implement the RNPP Project”. Worked as the Convener and the Member of the Committees formed for drafting and finalization of the ‘Bangladesh Atomic Energy Regulatory (BAER) Act-2012’.
- Also worked in different capacities in the committees formed by the Govt. of Bangladesh for developing various nuclear infrastructures in the country regarding Rooppur Nuclear Power Plant (RNPP) project based on IAEA Mile Stone documents. Coordinated various activities related to RNPP site specific design parameters;

Geotechnical studies; Mathematical modeling work conducted by the Institute of Water Modeling (IWM) for the Ganges River; Top level monitoring of the activities of the Nuclear Safety & Radiation Control Division (NSRCD) of BAEC.

- Significantly contributed as a team member of the Bangladesh Delegation to the Russian Federation in connection with finalizing of the draft 'Inter-governmental Agreement for the construction of NPP'. Participated in the meeting held in Dhaka in 2009 between the Hon'ble Prime Minister of the Govt. of Bangladesh and the Deputy Director General of IAEA to discuss issues in connection with the peaceful applications of nuclear energy in Bangladesh. Also participated in the meetings held between Bangladesh team and IAEA DG, H. E. Mr. Yukiya Amano during his visit to Bangladesh in 2010. Participated in meetings of the Forum for Nuclear Cooperation in Asia (FNCA) at Jakarta, Indonesia as well as in the General Conferences (GCs) of IAEA.
- **Contribution in the National projects:** National Institute of Biotechnology (NIB, 1st phase), Bangladesh Oceanographic Research Institute (BORI, 1st Phase), Bangabandhu -Hi-Tech-City, Kaliakoir (1st Phase).
- **Contribution in the International projects:** Worked as the focal point of the 'Comprehensive Test Ban Treaty Organization (CTBTO)', Vienna, Austria for implementation of the 'Auxiliary Monitoring Station (IMS)' in Bangladesh.

(ii) **In Bangladesh Atomic Energy Regulatory Authority (BAERA):**

- Member (18 December, 2016 – 17 December, 2019); Chairman (18 January, 2020 – till to date)
- **As Member of BAERA (December, 2016-December, 2019):** Contributed in the review and assessment on the technical aspects of Soil Stabilization Technology by Deep Soil Mixing (DSM) method with wet speed mixing (WSM) technology and its suitability for the improvement of the soil condition of Rooppur NPP from the safety point of view of the foundation of the Reactor as well as other safety category buildings and structures together with local, Russian and German experts. Contributed actively in the expert level meetings for issuance of (i) the Design and Construction Licenses of Rooppur NPP Unit-1 & Unit-2 (on 04 November, 2017 & 08 July, 2018 respectively) (ii) the regulatory permission for installation of Core Catcher of Unit -1 of RNPP in August, 2018 and Reactor Pressure Vessel of RNPP Unit-1 and different stages of licensing process of RNPP project on behalf of BAERA.
- Actively participated in the review and safety assessment of different chapters of the Preliminary Safety Analysis Reports (PSARs), technical documents of soil stabilization work performed by DSM method with WSM technology, design and construction documents of embankment and bank protection work along the river Padma for ensuring the safety of RNPP site during the entire life cycle of the plant.
- As a team leader/member of the Bangladesh delegation, participated in various meetings held between BAERA, Rostekhnadzor & JSC "VO "Safety", SEC NRS, TSOs of BAERA in connection with review and assessment of the safety related documents of the Rooppur NPP.
- Acted as contact point of Self-Assessment Coordination Group (SACG) Committee of Asian Nuclear Safety Network (ANSN) of IAEA from BAERA.
- **As a Chairman of BAERA during the period from 2020-Till to date:** Performing top level administrative, technical, financial and regulatory activities of BAERA. Inspected different manufacturing plants of Russian Federation to check the manufacturing quality of safety class (LTME) equipment, manufacturing of I&C systems of RNPP, fuel fabrication. Monitoring of the conformity assessment activities performed by JSC "VO "Safety".
- Participation in JCC meetings between the Russian Federation and Bangladesh, bilateral meetings with Rostekhnadzor and JSC "VO "Safety". Participation in the review and assessment of safety analysis reports of RNPP Project, issuance of license and permit for construction of different structure and installation of safety class equipment and regulatory inspection. Visited Leningrad NPP-2 to have experience on its infrastructure and operational aspects.

- Monitoring of the implementation of i) ‘Strengthening the Infrastructure of Bangladesh Atomic Energy Regulatory Authority to ensure nuclear and radiation safety of public and the environment’ ii) ‘Development of Nuclear and Regulatory Infrastructure of Bangladesh Atomic Energy Regulatory Authority to supervise the nuclear safety of RNPP’ ADP projects of BAERA.
- Successfully organized:
 - i) ‘IAEA Safeguards and State Systems of Accounting for and Control of Nuclear Material Advisory Service (ISSAS) Mission’ at BAERA HQ from 20-28 March, 2022.
 - ii) ‘IAEA Pre-IRRS (Preparatory Integrated Regulatory Review Service) Meeting from 26-27 April, 2022’ and ‘Pre-IPPAS (Preparatory International physical protection Advisory services) Mission and National Workshop’ held from 01-04 April, 2022.
 - iii) ‘IAEA Integrated Regulatory Review Service Mission’ to Bangladesh (27 November to 08 December, 2022) at BAERA Head office.
- Coordination of IAEA safeguards obligation activities in Bangladesh.
- Issuance of license, permit and monitoring of the regulatory activities regarding uses of radioactive sources & radiation generating equipment in the areas of health, agriculture, industry, research and irradiator facilities includes export/import control and their transportation.
- Liaison with IAEA and other international communities regarding bilateral activities of BAERA.
- **Countries visited in connection with Professional training & for other activities during services in BAEC & BAERA:** Japan, Republic of Korea, USSR (former), Pakistan, India, Iran, Thailand, Austria, Germany, The Netherlands, The Russian Federation, Indonesia, Malaysia, Hong Kong, Qatar, UAE, Nepal, USA & Saudi Arabia.
- **Proficiency in language:** Can read, write and speak Bengali & English fluently, can read Arabic, can speak and understand Hindi & Urdu fairly.
- **Other activities:**
 - Virtual participation in the i) Workshop on Promoting Effective Interaction Among Nuclear Industry and Regulatory Body in Countries introducing Nuclear Power programs, organized by African Commission on Nuclear Energy (AFCONE) and IAEA (30-31 May, 2022); ii) Round Table on the Harmonization of Licensing Process, Utopia or Reality held in the ‘ATOM EXPO2022’ in the Russian Federation ; Participation in Talk-Shows in the different Electronic Medias, Seminars & Round-Table Conferences held in the country in connection with RNPP project.
 - Participation in the IAEA General Conferences (GCs) in IAEA HQ, Vienna as a member of the Bangladesh Delegation. Participation in the meetings with IAEA, DGs and other Senior officials, high level delegations of other member states of IAEA. Participation in the Meetings of Senior Regulators, Meetings of Regulatory Cooperation Forum (RCF) and other technical side events during the GC.
 - Membership of Professional Societies: Life Fellow, Institute of Engineers, Bangladesh (F-3556); Life Member, BUET Alumni Association, Bangladesh (19777801171L); Member, Bangladesh Society of Non- Destructive Testing (BSNDT).