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**Human Resource Development Program of Bangladesh:
Strategy, Development and Needs**

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Bangladesh Atomic Energy Commission (BAEC)

***Established in 1973**

***Operates under the Ministry of Science and Information
& Communication Technology (MOSICT)**

Aim and Commitment:

***Peaceful use of Atomic Energy**

***Research & development on nuclear technology for the
social and economic development of Bangladesh**

Major Establishments of BAEC:

- *Atomic Energy Research Establishment
- *Atomic Energy Centre, Dhaka
- *Beach Sand Minerals Exploration Centre
- *Radioactivity Testing & Monitoring Laboratory
- *Institute of Nuclear Medicine and Ultrasound
- *Nuclear Medicine Centres (13)

Atomic Energy Research Establishment (AERE)

- *Institute of Nuclear Science and Technology
- *Reactor Operation and Maintenance Unit
- *Nuclear Minerals Unit
- *Central Engineering Facility

- *Institute of Food and Radiation Biology
- *Tissue Banking and Biological Research Unit

- *Scientific Information Unit
- *Institute of Electronics
- *Institute of Computer Science

Major nuclear plans of BAEC

- *Application of nuclear methodology, techniques and processes in industry, human health, agriculture, protection of the environment, etc.
- *Development of R&D facility at TRIGA Mark II research reactor
- *Isotope Production and their Applications in Nuclear Medicine Centers and Environmental Studies
- *PET CT and LINAC facilities in Nuclear Medicine
- *TANDEM Accelerator Facility
- *Commercial Gamma Irradiator for Radiation Processing Applications
- *Radiation Control and Waste Management
- *Capability Buildup to generate electricity from nuclear power reactors and Implementation of Rooppur Nuclear Power Project

Human Resource Development

Strategy & Policy of HRD

- *Demand-driven, need-based
- *Based on national nuclear R&D programs
- *Aims to make skilled, competent & efficient manpower as possible as

Present Status of HRD-1

***Orientation Training :**

- **Basic Nuclear Orientation Course for the young scientists**
(To share and preserve Nuclear knowledge)

***In-House Training:**

- **Non destructive Testing (NDT)**
- **Nuclear Safety and Radiation Control (NSRC)**
(*To strengthen public economy
*To increase public awareness of the benefits of
nuclear Technology)

***Academic program:**

- **Ph.D. by Government Research Scholarship Scheme**
- **Study Leave to carry out higher degrees on self arrangement**
(To enhance capacity of scientists in the Nuclear field of interest)

Present Status of HRD-2

***Through facilities of International agencies:**

IAEA

MEXT

FNCA

DAAD

IDB

CIDA

Colombo Plan

ICTP

***On job Training**

***Distance Learning Training:**

BAEC technical personnel participated distance learning program of IAEA on Nuclear Medicine.

Present Status of HRD-3

- *Nuclear Research facilities to the University students with both academicians and researchers**
- *Innumerable students pursuing research in connection with their M.S. and M.S. leading Ph. D.**
- *Scientists of BAEC have also allowed to avail the facilities to earn academic degrees from universities**

Foreign training/fellowship availed by BAEC scientists and offered to BAEC scientists in July 2008 - to date

MEXT	04
RCA Training	27
IAEA Fellowship	08
IAEA short Training	14
Workshop/Meeting of FNCA	08

Feature of Electrical Energy of Bangladesh

Per capita availability 170 kWh
Developing countries 650 kWh
World Average 2200 kWh
India and Pakistan 600 kWh

*The lowest among the developing countries

*Hampering growth of end-use sectors and economy

- Rooppur Nuclear Power Project



Status of Rooppur Nuclear Power Project (RNPP)-1

- *Proposal in 1961**
- *Site selected in 1963 and Land acquired 292 acres**
- *The ECNEC had approved the Project Plan in 1980**
- *Feasibility studies were conducted in 1986-87**
- *A Cabinet Committee was formed in 1992**
- *Decision to implement RNPP in 1997**
- *Government has approved Bangladesh Nuclear Power Action Plan in 2000**
- *Pre-project activities were carried out during 1999-2000**
- *The Site Report was updated and reviewed by IAEA in 2003.**
- *Draft Bid Invitation Specification Document was Prepared in 2003**

Status of Rooppur Nuclear Power Project (RNPP)-1

***Government of Bangladesh has approved a project, “Accomplishment of necessary activities for implementation of RNPP” during 2008-2011.**

***IAEA has approved a project “Establishing nuclear power” in Bangladesh with the objective of capacity building for embarking on first unit of RNPP by 2011**

***Bangladesh expects to set up two Nuclear Power Plants (NPPs) in the national grid by 2020. Beyond 2025 the nuclear share would be 15-20% as envisaged in the NEP**

Required HRD program for Decision Making Phase

- *Nuclear power project management
- *Nuclear Regulatory Activities
- *Project Planning and project management
- *QMS
- *Safety Analysis
- *Bid Preparation and Bid Evaluation
- *Financing
- *Regulatory control, etc.

Fellowships, Short training course, On-Job training

HRD program

- *Fresh manpower will be appointed from the Universities
- *Manpower for operation and maintenance of the nuclear power plant will be trained in cooperation with the plant supplier
- *Academic program in Nuclear Engineering
- *On Job Training

Needs for successful implementation of the RNPP project

Qualified human resources are essential on:

- *Various nuclear fields of Engineering
- *Instrumentation and control
- *water management
- *Administration
- *Security, etc.

***BAEC usually places its needs of HRD to FNCA through ANTEP needs.**

***BAEC is hopeful that FNCA-HRD program will play an important role for the development of skilled manpower of BAEC through its activities.**

***BAEC believes that increased co-operation and intensified sharing of nuclear knowledge on nuclear power and other nuclear applications could help Bangladesh to overcome major obstacles to the sustainable use of nuclear technology.**

Thank you