Workshop on Promoting Effective Interaction Among Nuclear Industry and Regulatory Body in Countries Introducing Nuclear Power Programmes

AFCONE Virtual Event Organized by AFCONE with Support from the IAEA,

30-31May 2022

Nuclear Regulatory Infrastructure of Bangladesh Atomic Energy Regulatory Authority

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Chairman

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- Vision of Nuclear Power in Energy Mix
- BAERA Legal Basis
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- Conclusions

Vision of Nuclear Power in Energy Mix

- The Government of Bangladesh declared the intention to develop the country to become a developed country by 2041 as the key goal of VISION 2041.
- **As on May 10, 2022**: Installed Capacity→**21,484** MWe
- Probable Max Demand → **12,344** MWe

- Maximum Power Demand will be in **2041→50,000 MWe**
- **<u>9% will be from nuclear.</u>**

Power System Master Plan 2016


Final Report

Power System Master Plan 2016
Summary

Supported by
Japan International Cooperation Agency (JICA)
Tokyo Electric Power Services Co., Ltd.
Tokyo Electric Power Company Holdings, Inc.

Power Division
Ministry of Power, Energy and Mineral Resources
Government of the People's Republic of Bangladesh

September 2016

Status of Rooppur NPP Project Site, 2016

Ishwardi Upazila of Pabna District in Rajshahi Division

RNPP Site is 160 Km North West from the Capital City a.

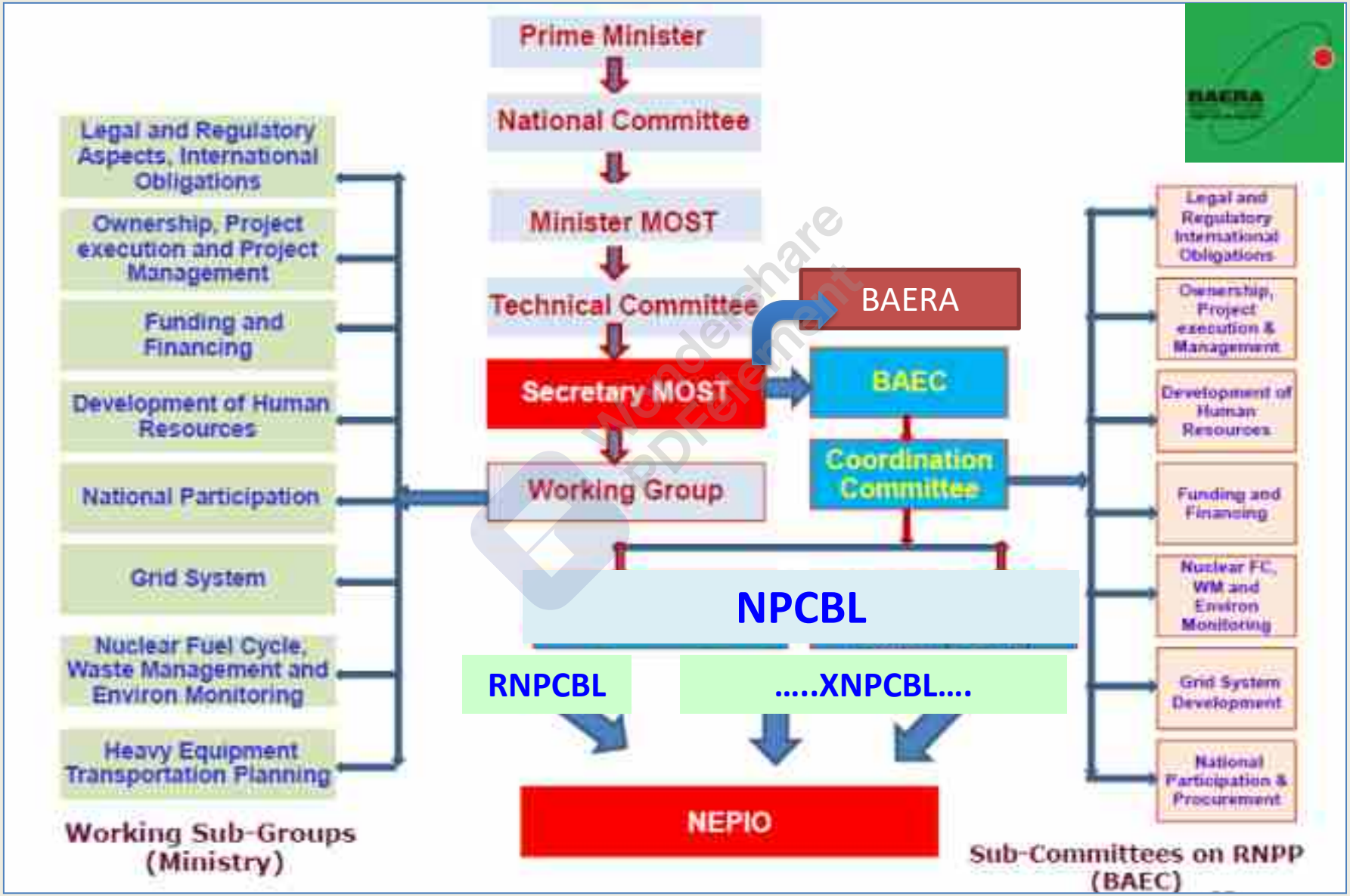
Status of Rooppur NPP Project Site, May 2022

Status of Rooppur NPP Project Site, May 2022

Rooppur NPP: Management System

- 1973-> BAEC was formed.
- 2000-> Bangladesh Nuclear Power Action Plan (BANPAP) was approved.
- 2015-> Nuclear Power Plant Company Bangladesh Ltd.(NPCBL) was Established.
- 2015-> General Contract was signed for 2 x VVER-1200 MWe (AES-2006)
- NEPIO-> a High-level Committee was formed.

Rooppur NPP: Management System



Key Organizations for Nuclear Power Sector of Bangladesh

- **NEPIO**-Headed by Hon'ble Prime Minister; MoST is the Secretariat of the NEPIO;
- **NPP Owner Organization (Licensee)**-BAEC;
- **NPP Project Management Organization**-PMU, BAEC;
- **Nuclear Regulatory Authority**-BAERA;
- **Environmental Regulator**-DOE;
- **NPP Operating Organization**- NPCBL; and
- **TSOs-**BAEC, NSPC, BTCL, Civil Defense and Fire Service Directorate

Bangladesh Atomic Energy Regulatory Authority (BAERA) Legal Basis

Status of legislative framework

- 2012-> BAER Act was promulgated.
- 2013-> BAERA was established.

Prime Responsibility of BAERA to Supervise Licensee's Activities to Assure

- NUCLEAR SAFETY
- NUCLEAR SECURITY
- SAFEGUARDS
- NUCLEAR LIABILITY

BAERA Head Office at Dhaka

Status of Legislative Framework

LEGAL BASIS FOR CONTROL : Laws have Hierarchy, as

ACT / ORDINANCE
NSRC Act-21 of 1993; now BAERA Act-2012

↓

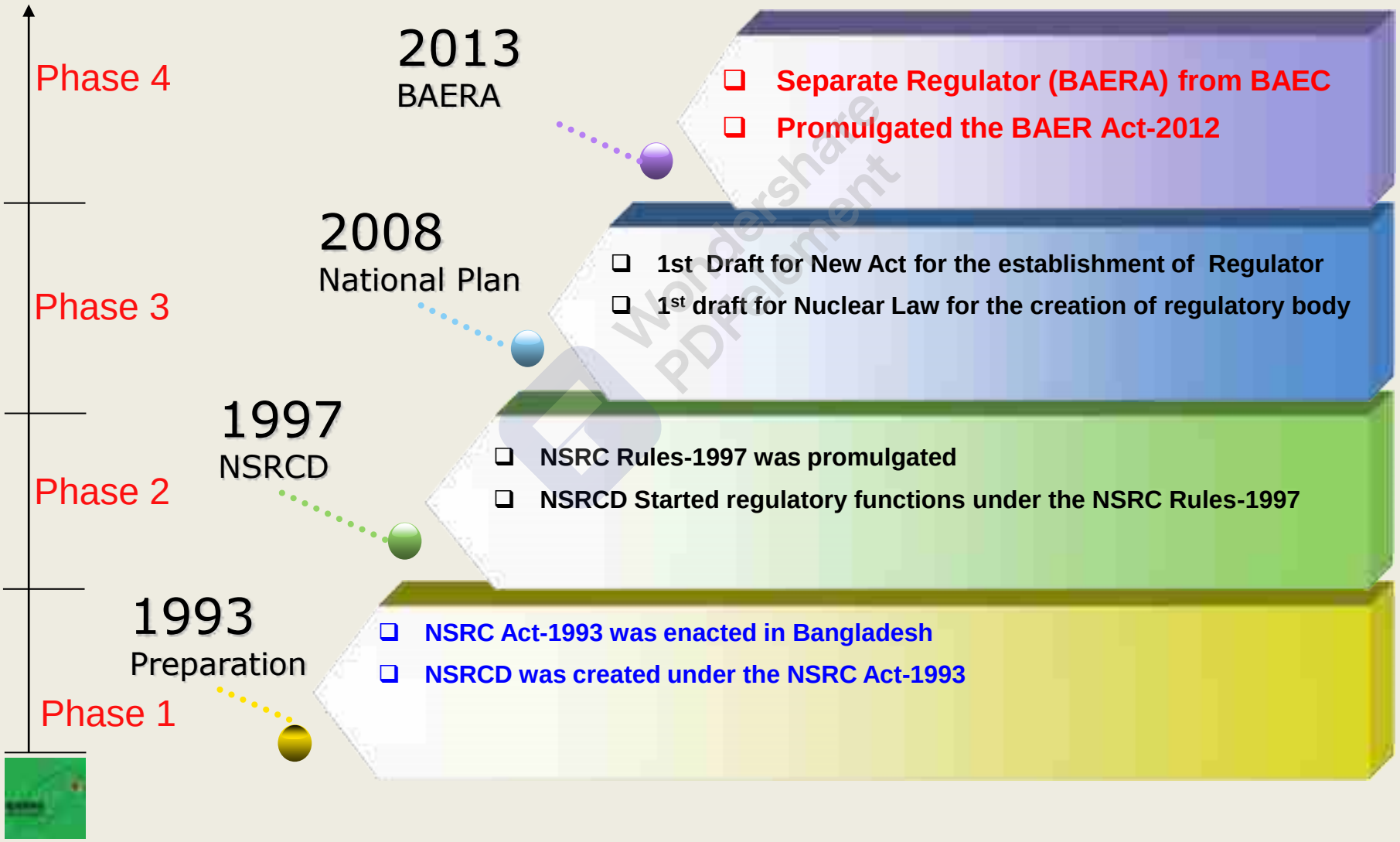
RULES / REGULATIONS
NSRC Rules-1997

↓

NOTIFICATIONS

Rules are based on FAO, IAEA, ILO, OECD/NEA, PAHO & WHO endorsed BSS [1996] recommendations.

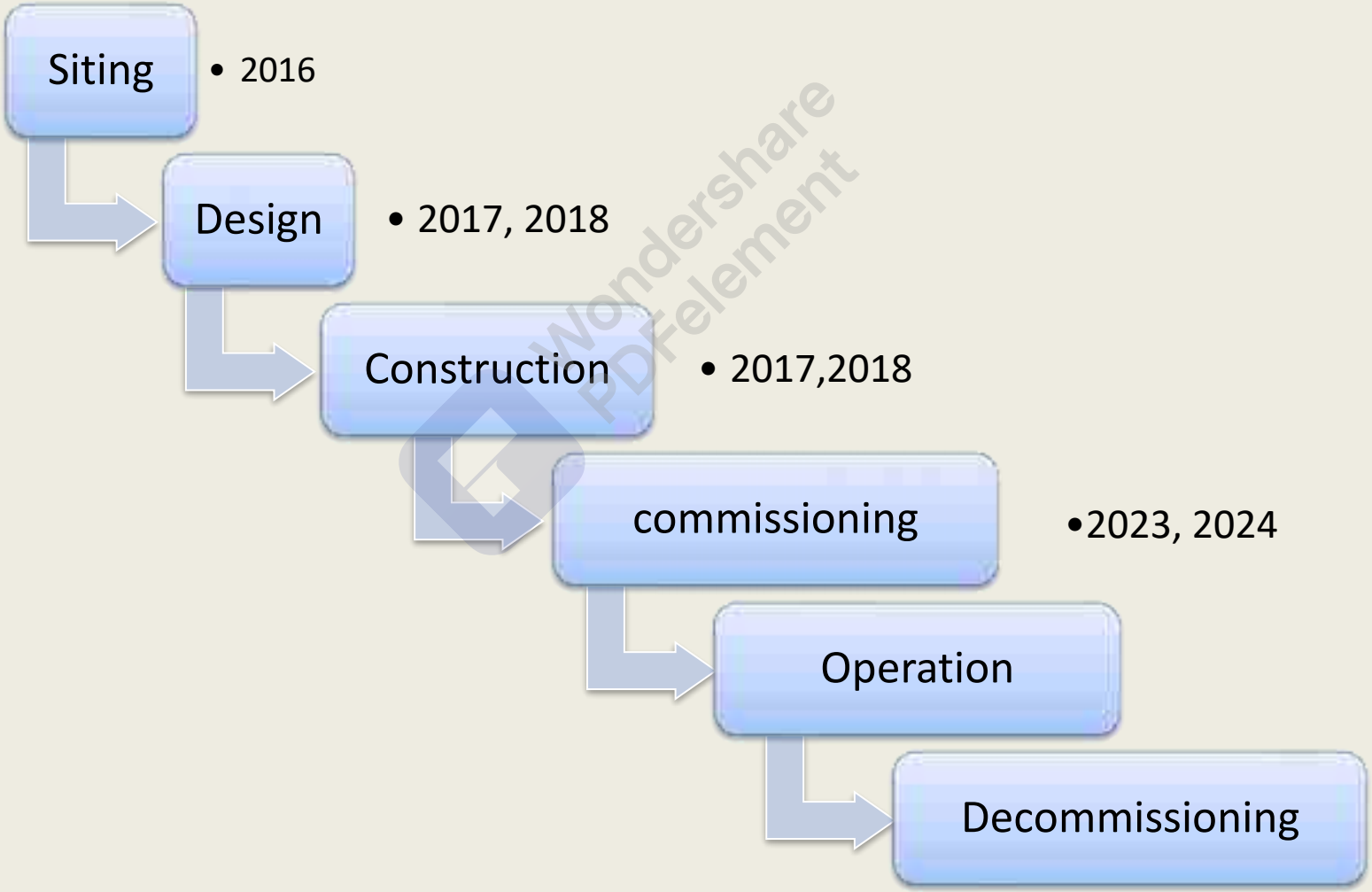
Chronological Development of BAERA



Role of operator and regulator…INSAG-26

38. Principle 1 of the IAEA Fundamental Safety Principles states that "the prime responsibility for safety must rest with the person or organization responsible for facilities and activities that give rise to radiation risk" [1]. The licensee retains this responsibility throughout the lifetime of the licensed facilities, and this responsibility cannot be delegated. There should be no confusion between the role of the operator and the role of the regulator: the operator is responsible for safety, whereas the regulator is responsible for approving and providing independent oversight of the operator's activities that could impact safety.

BAERA NPP Major Licensing Stages Article 19 of BAER Act 2012



Regulatory Documents

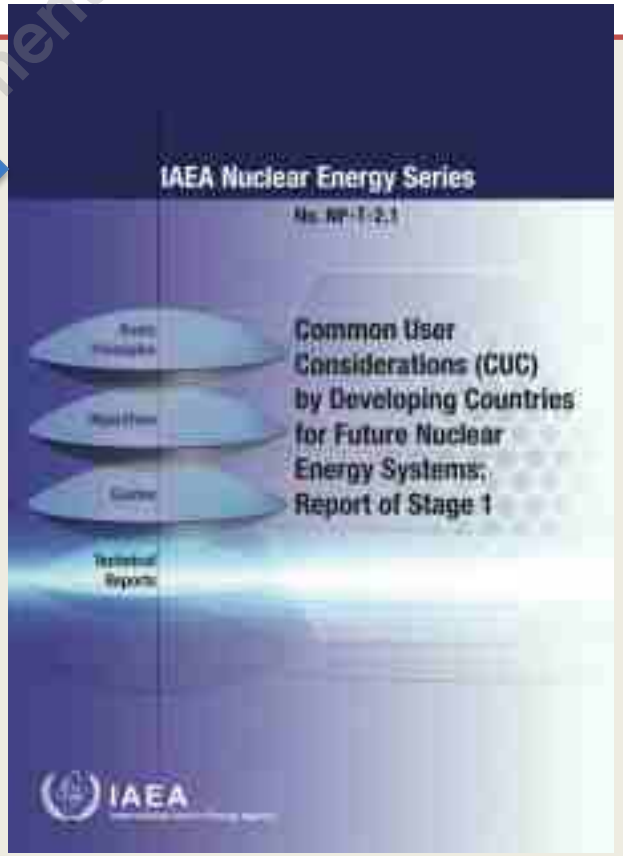
EIA → FE → SSAR → PSAR → FSAR → PSR

As per NSRC Rules 97
BAERA uses regulatory guidance documents of established regulatory bodies for conducting review and assessment of licensee's documents

(NP-006-98) : Requirements to Contents of Sa
Report of Nuclear Power Plant with VVER Reactors

Assistance from ROSTECHNADZOR

- "…Regulatory Bodies in supplier Countries would be requested to support Regulatory Authorities in user Countries in the review of licensing documents."



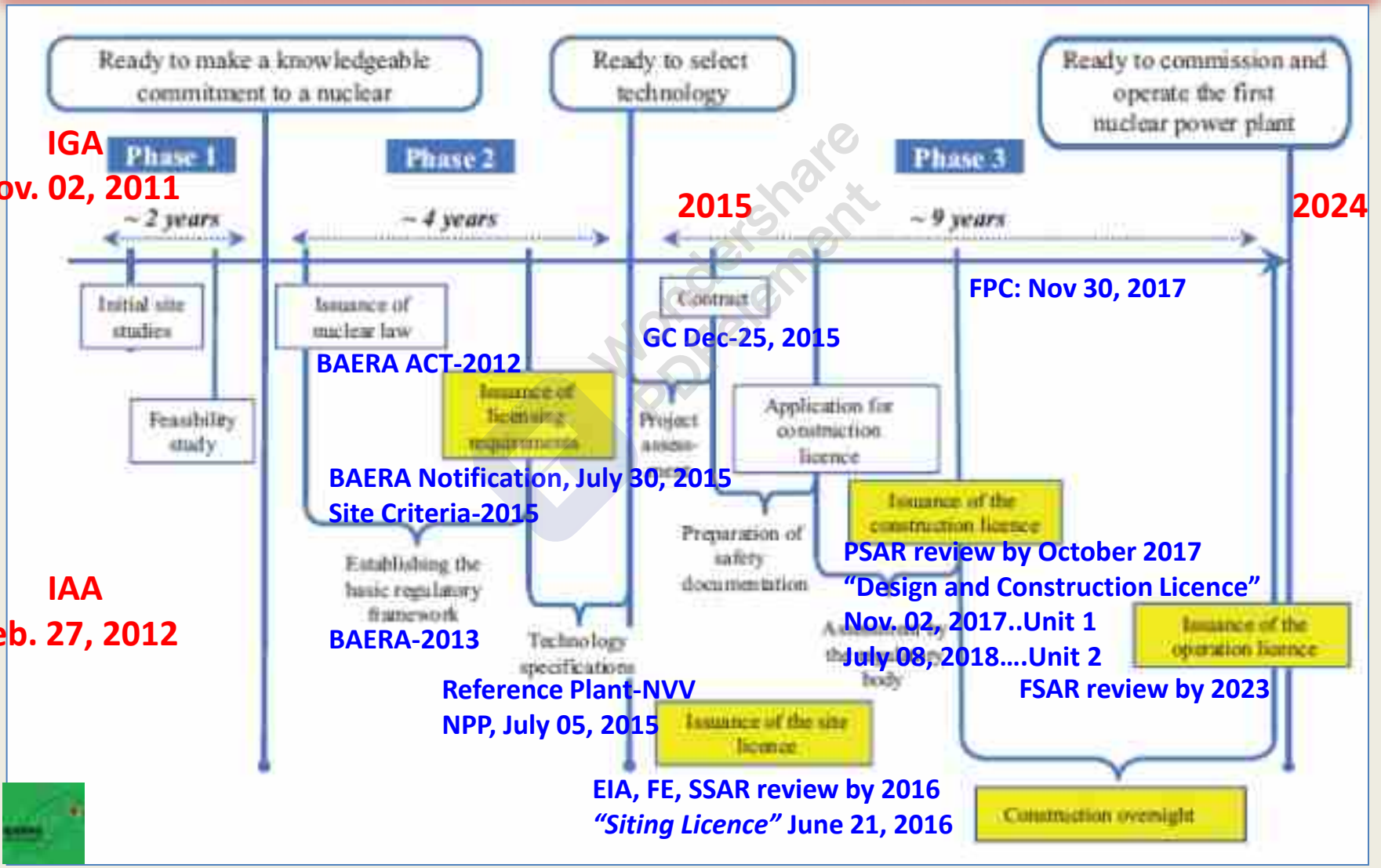
BAERA-ROSTECHNADZOR Inter Agency Agreement-27/02/12

- the Parties accomplish their co-operation in the field of safety regulation during siting, design, construction, commissioning, operation and decommissioning of nuclear power plants in the following main areas:

(i) Development of **legislative basis** in the field of nuclear and radiation safety;
(ii) **Licensing** of activities in the field of peaceful use of atomic energy;
(iii) Oversight and control activity including the development and Implementation of **inspection** programs;
(iv) Management of **radioactive waste** and spent nuclear fuel, including their transportation and safe storage;
(v) **Physical protection** of nuclear installations radiation sources, storage facilities, nuclear materials and radioactive substances, accounting and control of nuclear materials;
(vi) **Quality assurance** of equipment for nuclear power plants;
(vii) **Emergency** preparedness and emergency response;
(viii) **Training** of nuclear regulatory body personnel; and
(ix) Other areas accepted by mutual agreement between the Parties.

BAERA NPP Major Licensing Steps

BAERA NPP licensing steps are also consistent with INSAG-26:



Only Licensing??
Hold Points are → Approval
Up to Now…..82 Notifications were Issued.

- **Major Notifications:**
- BAERA *regulatory notification* on **time bound requirement**, Ref. 39.07.000.03.00.051.09/49, July 30, 2015;
- BAERA *regulatory notification* on **design certification** issue, Ref. 39.07.000.03.00.051.2016-12, Dated 24 May 2016;
- BAERA *regulatory notification* on **insurance issue**, Ref. 39.07.0000.004.01.181.17-055, Dated 02/05/2017;
- BAERA regulatory notification on **soil stabilization** issue Ref. 39.07.000.03.00.051/2009-0002, Dated July 09, 2017;
- BAERA *regulatory notification* on **human resource development** (HRD) issue, Ref. 39.07.0000.000.03.051.17-03 (Part 1), Dated June 08, 2017 and Ref. 39.07.0000.000.03.051.17-03 (Part 1), Dated September 24, 2017;
- Agreed Protocol between BAERA and BAEC on **design certification** issue, Dated August 08, 2018;
- BAERA *regulatory notification* on **LTME approval** issue, Ref. No. 39.07.0000.000.03.095.17-07/615, Dated March 15, 2018; and
- BAERA *regulatory notification* on **major deficiencies**, Ref. 39.07.0000.000.03.070.14(Part-2)/17-18, Dated October 17, 2018.

Technical Support Organizations

Vendor Regulatory Resources: Assistance in the regulatory review process of NPP licensing and Regulatory Human Resource Development (RHRD):

ROSTECHNADZOR → VO "Safety", SEC NRS

National Stakeholders: BUET, DU, SOB, GSB, BMD, DOE, IWM, CDMP, etc.

AERB, India: cooperation is in place.

IAEA Mission Related to Nuclear Power Program

- **INIR Mission**: 2011
- **INIR Follow-Up Mission**: 2016
- **OLA Mission**: 2017
- **IPPAS Mission**: 2009
- **Site Safety Review Mission**: 2011, 2014
- **INSSP Mission**: 2013-2016
- **IPPAS Mission**: Q1, 2023
- **IRRS Mission**: Nov. 27 to Dec 09, 2022
- **EPREV Mission**: Q3, 2023.

BAERA-ROSTECHNADZOR Cooperation

- A bilateral meeting was held between Bangladesh Atomic Energy Regulatory Authority and Nuclear Regulatory Body (ROSTECHNADZOR) of Russian Federation, March 30-April 01, 2015.

- Both parties have agreed to finalize the draft assistance proposal for BAERA by April, 2015.

BAERA NPP related Activities 2013-2014:

BAERA-IAEA Joint meeting on drafting of "Regulatory Guidance on Site Evaluation of the Safety of NPP" at IAEA HQ, Vienna, Austria, 6-15 November 2013.

BAERA-IAEA Joint Pre-SEED Review Mission on Regulatory Guidance on Site Evaluation for the safety of Nuclear power plant on 18-20 Feb, 2014.

BAERA NPP related Activities 2014-2015:

An Introduction to Safety Assessment for Nuclear Power Programme, 18-20 November, 2014.

A bilateral meeting was held between Bangladesh Atomic Energy Regulatory Authority and Nuclear Regulatory Body (ROSTECHNADZOR) of Russian Federation, Dhaka, March 30-April 01, 2015

BAERA NPP related activities 2014-2015:

A follow-up bilateral meeting was held between Bangladesh Atomic Energy Regulatory Authority and Nuclear Regulatory Body (ROSTECHNADZOR) of Russian Federation, Moscow, October 12-15, 2015.

First Site License Preliminary Assessment Meeting was held between Bangladesh Atomic Energy Regulatory Authority and Nuclear Regulatory Body (ROSTECHNADZOR) of Russian Federation, Moscow, Dec 13-19, 2015.

BAERA NPP related Activities 2016-2017:

IAEA

IAEA Reviews Progress of Bangladesh's Nuclear Infrastructure Development

Bangladesh has made noticeable progress in implementing the recommendations of an IAEA Integrated Nuclear Infrastructure Review (INIR) mission, a team of experts concluded earlier this month. The experts found that a majority of the recommendations and suggestions have been acted on, but considerable work remains as Bangladesh moves forward in developing its

INIR Follow-up Mission, Dhaka, 10 to 14 May, 2016.

Awareness Mission and National Workshop on the Legal Framework for Nuclear Safety, Nuclear Security and Nuclear Liability, Dhaka, 28 Feb to 02 March, 2017.

Issuance of RNPP siting licence

BAERA issued conditional siting licence on June 21, 2017.

Issuance of Approval for Soil Stabilization works–July 09, 2017

RNPP Soil Stabilization Approval, reviewed by **PROF. KATZENBACH, JSC "VO "Safety", AERB and Local Experts, July 01 to 06, 2017.**

Handover of Design and Construction Licence for RNPP Unit 1, Nov.04, 2017

Regulatory Inspection at RNPP construction site

BAERA Regulators conduct frequent inspection at RNPP construction site with the help of its TSO JSC “VO “Safety”.

Handover of Design and Construction licence for RNPP Unit 2, July 08, 2018

BAERA NPP Related Activities 2018:

Chairman, Spanish Nuclear Safety Council Chairman Mr. Luis Fernadu Marti Scharfhausen and Head of International Regulatory body Dr. Alfredo Balbino de los Reyes of Spanish Nuclear Safety Council (CSN) visited BAERA on 19-20 November, 2018 to discuss bilateral cooperation between CSN and BAERA.

BAERA NPP related activities 2019-2021:

- Completion of JSC "VO "Safety" **2nd Contract** for 2019 – 2021.
- Approval for 10UJA and 20UJA and other structures up to certain elevation depending on test results.
- Approval for safety class related equipment under strict regulatory conditions.
- Recruitment of new regulators.

BAERA NPP related activities 2022:

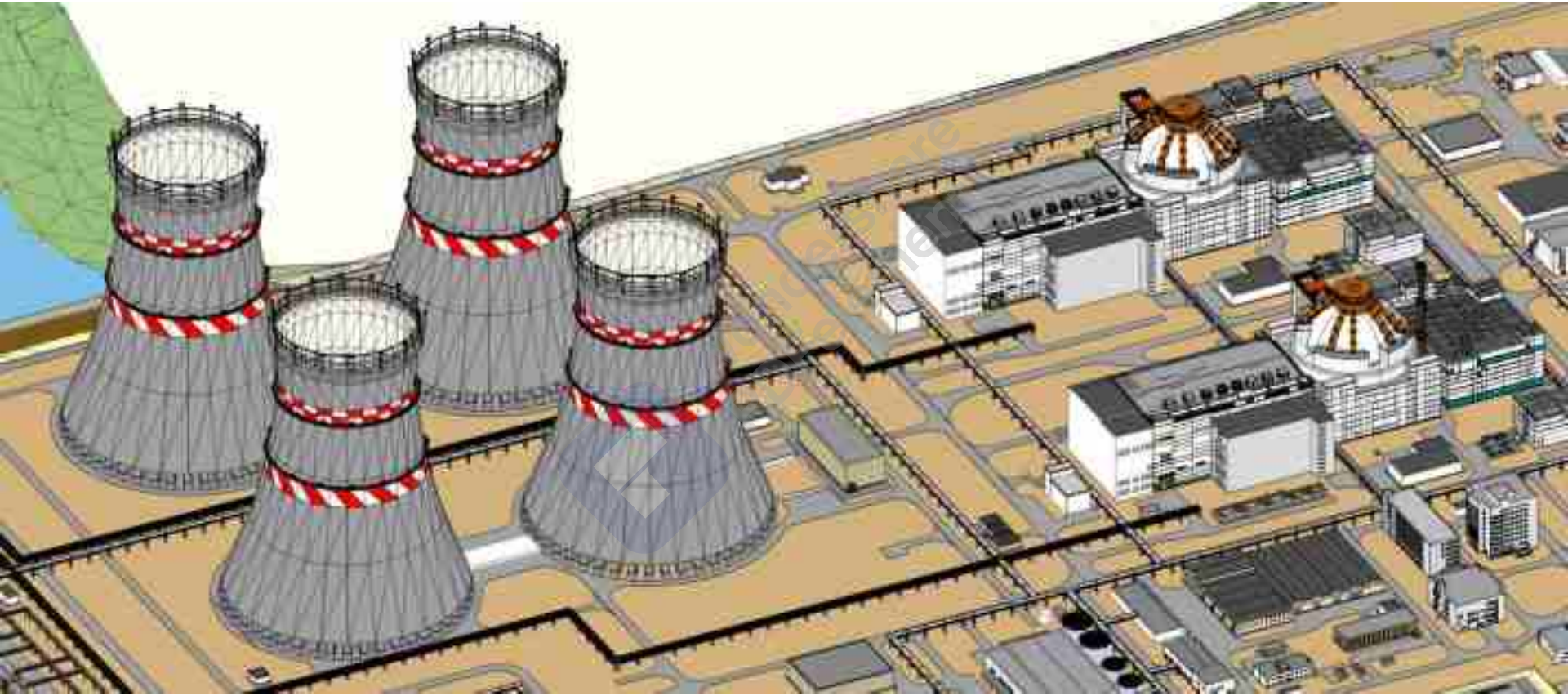
- Completion of JSC "VO "Safety" **3rd Contract** for 2022 to 2024. Assistance during commissioning and operation licenses have been identified.

- Approval for safety related SSCs of Unit 1 and Unit 2 with regulatory conditions.

- Recruitment of new regulators. Local training is ongoing.

- Negotiations of vendor country training of these newly recruited regulators are being continued.

Commissioning and Operation will be in 2023 and 2024.



International Treaties and Conventions

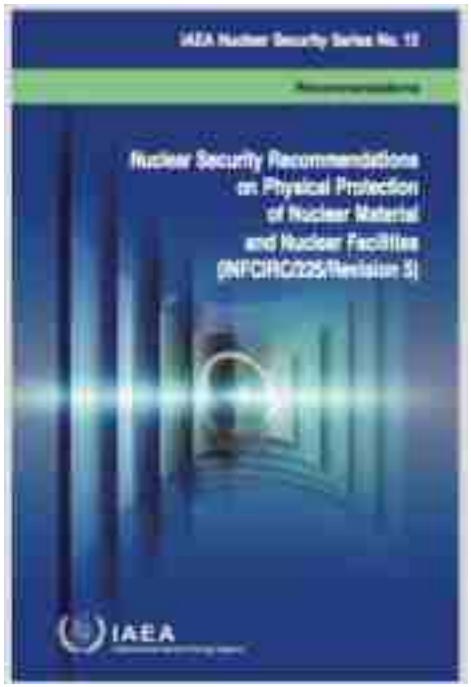
Title	In Force	Statues
Convention on Early Notification of a Nuclear Accident (INFCIRC/335)	1988-02-07	Accession: 1988-01-07
Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency (INFCIRC/336)	1988-02-07	Accession: 1988-01-07
Convention on Nuclear Safety (INFCIRC/449)	1996-10-24	Signature: 1995-09-21 acceptance: 1995-09-21
Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management (INFCIRC/546)		Non-Party
Code of Conduct on the Safety and Security of Radioactive Sources (INFCIRC/663) and supplementary Guidance on the Import and Export of Radioactive Sources (IAEA/CODEOC/IMO-EXP/2012)	Notification pursuant to GC(47)/RES/7.B ….√	Contact Point Designated…√

International Treaties and Conventions

Title	In Force	Statues
Convention on the Physical Protection of Nuclear Material (INFCIRC/274/Rev.1)	2005-06-10	Accession: 2005-05-11
Amendment to the Convention on the Physical Protection of Nuclear Material (GOV/INF/2005/10-GC(49)/INF/6)	2017-07-04	Acceptance: 2017-07-04

Nuclear Safety must be Transparent, but
Nuclear Security is Highly Confidential or Classified.

As per Sl. No. 10 of Schedule IX of NSRC Rules-1997-→ IAEA Publications under INFCIRC shall be followed.



International Treaties and Conventions

Title	In Force	Statues
Vienna Convention on Civil Liability for Nuclear Damage (INFCIRC/500)		Non-Party
Joint Protocol Relating to the Application of the Vienna Convention and the Paris Convention (INFCIRC/402)		Non-Party
Protocol to Amend the Vienna Convention on Civil Liability for Nuclear Damage (INFCIRC/566)		Non-Party
Convention on Supplementary Compensation for Nuclear Damage (INFCIRC/567)		Non-Party

BAER ACT-2012 was formulated in consideration with above mentioned areas. as per Section 45 → 300 Million SDR shall be allocated by the licensee.

International Treaties and Conventions

Title	In Force	Statues
Application of Safeguards in connection with the Treaty on the Non-Proliferation of Nuclear Weapons	1982-06-11	Signature: 1982-06-11
Protocol Additional to the Agreement between the People's Republic of Bangladesh and the IAEA for the Application of Safeguards in Connection with the Treaty on the Non-Proliferation of Nuclear Weapons	2001-03-30	Signature: 2001-03-30

As per Section 34 (1) BAER Act 2012, BAERA shall act as a coordination body to implement safeguards related activities in Bangladesh.

IAEA Safeguards Inspection

- IAEA Safeguards inspection was conducted on 07-08 December 2020 and 27-30 November 2021.

19 Infrastructure Issues

(NG-G-3.1 (Rev. 1)...2015)

- National position
- Nuclear safety
- Management
- Funding and financing
- Legal framework
- Safeguards
- Regulatory framework
- Radiation protection
- Electrical grid
- Human resource development
- Stakeholder involvement
- Site and supporting facilities
- Environmental protection
- Emergency planning
- Nuclear security
- Nuclear fuel cycle
- Radioactive waste management
- Industrial involvement
- Procurement

Present workforce of BAERA and Organizational Structure

- Scientific and Engineering Staff: 22+20+26=68
- Supporting Staff: 40+20=60
- TSOs: National Institutes and Universities
- Vendor Country Regulatory Body: Rostechnadzor and its TSOs – JSC “VO “Safety” and SEC NRS
- Indian Regulatory Body: AERB
- IAEA TC project for capacity building for regulatory oversight, licensing, HRD for core personnel, etc.

ORGANOGRAM
Of
Bangladesh Atomic Energy Regulatory Authority
Ministry of Science and Technology

FUNCTIONS:

1. To ensure the safe and peaceful uses of atomic energy according to the Act, and Rules & Regulations made there under.
2. To establish and adopt necessary standards, codes and guides.
3. To issue, amend, suspend or revoke authorizations i.e., license, certificate, registration, permit, etc.
4. To ensure the proper implementation of regulations related to nuclear safety, radiation protection, security, safeguard, import and export control and physical protection.
5. To establish a system or process of review and assessment for regulatory function;
6. To establish a programme for carrying out inspection;
7. To carry out review and assessment, inspection, and licensing;
8. To establish a guideline for enforcement actions and initiate and carryout enforcement actions against non-compliance.
9. To define exclusion related affairs.
10. To define and grant exemptions of nuclear and radiation facilities from regulatory control.
11. To define obligations, including financial ones, of persons or entities authorized.
12. To establish limits of radioactivity into soil, water and air and in any matter usable as food or during or otherwise by human being and animal;
13. To establish a public participation system through seminar, workshop, electronic and print media and internet, etc for information and consultations with interested parties about the possible risks associated with facilities and activities;
14. To participate in the definition of the design basis threat for the implementation of security provisions;
15. To establish and maintain a national register for radiation sources;
16. To establish and maintain a national register for persons authorized to carryout activities or practices under the Act;
17. To act as an organizer and coordinator for the implementation of the obligations arises from safe guard agreement;
18. Actions for implementations of international treaty, agreement, protocol and convention concerning nuclear safety and radiological emergency plan including safeguards and physical protection of nuclear and radioactive material, illicit trafficking to which Bangladesh is the contracting party.
19. To establis
20. To conduc
21. To liaise a health and
22. To act as a activities.
23. To approve an effective reporting procedures with respect to radiological incidents and to ensure that plans for protective action in emergency situation have been prepared;
24. To ensure that appropriate measures for physical protection of nuclear installations, and nuclear & radioactive material are taken;
25. To establish regulatory measures for the security of nuclear and radioactive material and their associated facilities, including measures for the detection, prevention and response to unauthorized or malicious acts involving such material, or facilities;
26. To ensure that corrective actions are undertaken when unsafe or potentially unsafe conditions are detected concerning a nuclear installations, radiation generator, nuclear material, nuclear substance or radioactive material;
27. To carry out activities associated with civil liability for nuclear damage;
28. To liaise with regulatory bodies of other countries and with international organizations to promote co-operation and exchange of regulatory information;
29. To establish the criteria for the recruitment and the service for it's employees.
30. To establish and maintain human resource development and training program for it's employees;
31. To exchange regulatory information and extend cooperation with other regulatory authority, relevant agencies and organizations;
32. To publish related information and communicate with relevant agencies, the public and media;
33. To create awareness to the public about nuclear safety and radiation protection.
34. To establish a schedule of fees and charges;
35. To formulate or adopt necessary policies and issues and implement orders or instructions in areas of its responsibility;
36. To perform any other duties prescribed or assigned to the Authority by the Government from time to time as deems necessary to meet its statutory obligations;

Chairman

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Personnel-5
1xChairman = 1
1xAdministrative Officer = 1
1xOffice Assistant cum Computer Operator= 1
1xDriver =1
1xGeneral Attendant = 1

Member (Nuclear Safety)

Personnel-4
1xMember = 1
1xOffice Assistant cum Computer Operator =1
1xDriver =1
1x 1xGeneral Attendant (GA) = 1

Member (Radiation Safety)

Personnel-4
1xMember = 1
1x 1xOffice Assistant cum Computer Operator = 1
1xDriver =1
1x General Attendant = 1

Secretary

Personnel-3
1xSecretary = 1
1xOffice Assistant cum Computer Operator = 1
1x General Attendant = 1

Financial Adviser

Personnel-3
1xFinancial Adviser = 1
1x 1xOffice Assistant cum Computer Operator = 1
1x General Attendant = = 1

Member (Technical)

Personnel-4
1x Member = 1
1x Office Assistant cum Computer Operator = 1
1xDriver =1
1x General Attendant = 1

Member (Planning & Development)

Personnel-4
1xMember = 1
1xOffice Assistant cum Computer Operator = 1
1xDriver =1
1x General Attendant = 1

Nuclear Safety, Security and Safeguard Division

Personnel-40
1xChief Scientific Officer = 1
1x Chief Engineer =1
4xPrincipal Scientific Officer =4
2xPrincipal Engineer = 2
4xSenior Scientific Officer =4
5xSenior Engineer = 5
6x Scientific Officer = 6
9xEngineer = 9
1xSub-Assistant Engineer = 1
1x Technician-2 =1
1x Lab Attendant = 1
2xComputer Operator = 2
1xDriver = 1
2xGeneral Attendant = 2

Radiation, Transport and Waste Safety Division

Personnel-26
1xChief Scientific Officer = 1
2x Principal Scientific Officer = 2
3xSenior Scientific Officer = 3
3xSenior Engineer = 3
6x Scientific Officer = 6
4x Engineer =4
2x Computer Operator = 2
1x Office Assistant cum Computer Typist = 1
1xDriver = 1
1x Lab Attendant = 1
2xGeneral Attendant = 2

Administration & Establishment Division

Personnel-14
1x Deputy Director (Admin & Finance) =1
1x Assistant Director (Admin) =1
1x Administrative Officer = 1
1xSuperintendent = 1
1xComputer Operator =1
1x Storekeeper =1
1xOffice Assistant cum Computer Operator=1
3xSecurity Attendant = 3
2xGeneral Attendant =2
2xSanatary Attendant= 2

International Affairs Division

Personnel-3
1xSenior Scientific Officer= 1
1x Scientific Officer = 1
1xEngineer = 1

Finance Division

Personnel-5
1x Assistant Director (Accts) =1
1xAccounts Officer= 1
1xAccountant = 1
1xAccount Assistant =1
1xGeneral Attendant = 1

Training Division

Personnel-6
1xChief Scientific Officer = 1
1xComputer Operator= 1
1xOffice Assistant cum Computer Operator= 1
1x Technical Helper =1
1xGeneral Attendant = 2

Technical Division

Personnel-6
1xChief Engineer = 1
1xPrincipal Engineer= 1
2xSub-Assistant Engineer = 2
1x Technician-1 =1
1xGeneral Attendant = 1

Planning & Development Division

Personnel-6
1xChief Scientific Officer = 1
1xSenior Scientific Officer= 1
1xSenior Engineer= 1
1x Scientific Officer = 1
1xEngineer = 1
1xComputer Operator =1

Legend:
Senior CSO/CE in Charge of Directors

SUMMARY OF MANPOWER

Sl. No.	Name of the Post	No. of Post
	Class I	
1	SSO	2
2	SE	3
3	Deputy Director (Admin & Finance)	1
4	SO	4
5	Engineer	9
6	Assistant Director (Finance)	1
7	Assistant Director (Admin)	1
8	Storekeeper	1
9	Tech-2	2
	Grand Total	24

AUTHORIZATION OF THE TRANSPORT, MAJOR SCIENTIFIC & OFFICE EQUIPMENTS:

A. TRANSPORT

1. **5x Jeep for the Chairman & Members = 5 Jeeps**
2. **1x Jeep for the Use of BAERA administrative and official use, including travel to the office of authorized officers=1 Jeep**
3. **1x Microbus Use of BAERA office work including travel to the office of Senior Scientific Officer / other officers of the same rank= 1 Microbus**
4. 1x Jeep for the Director, Planning and Development Division= 1 Jeep
5. 1x Double Cabin Pickup for the Radiological Inspection=1 Double Cabin Pickup
6. 1x Hiace Microbus for the 06 (Six) Chief Scientific Officers / Chief Engineers living in different places in Dhaka city= 1 Hiace Microbus
7. 1x Hiace Microbus for the 10 (Ten) Principal Scientific officers/ Principal Engineers living in different places in Dhaka city= 1 Hiace Microbus

B. MAJOR OFFICE EQUIPMENTS

Sl. No.	Name of Equipments	No of Items
1	Fax	3
2	Telephone	80
3	Computer	100
4	Printer	90
5	Laptop	20
6	Scanner	20
7	Fridge	15
8	Photocopier	15
9	Projector	4
10	Television	2
11	Air Conditioner	90
12	Generator	1
13	Close-circuit Camera system	1
14	Digital Camera	4
15	LAN, Servers, Router system	1

C. MAJOR SCIENTIFIC EQUIPMENTS

Sl. No.	Name of Equipments	No of Items
1	X-Ray & Gamma Survey meter	50
2	Alpha & Beta Survey meter	20
3	Neutron Monitor	15
4	Spectrometer	10
5	Contamination Monitor	15
6	Emergency Kit	15
7	Pocket Dosimeter	50
8	HPGe Gamma Detector	5
9	Floor Contamination Monitor	10
10	Hand & Foot Monitor	6
11	Hazmat PPE System	30
12	Extremity Dosimeter	40
13	Quality Control Kit for Different Practices	10
14	NPP Simulator	1
15	GPS Receiver	4

Inspection at RNPP site

- Daily inspection at RNPP site is being conducted throughout the year.
- On an average 07 JSC “VO “Safety” experts are present at site to assist BAERA inspectors at site.
- Comprehensive inspection is also conducted during the installation of major equipment. Duration of such an inspection is about 03 to 05 days.
- Rostechnadzor also deploys its own field specific inspectors at site to assist BAERA inspectors.

Preparation for Commissioning License

- **BEFORE FUEL LOADING AND INITIAL CRITICALITY**
  - PROVISIONAL FINAL SAFETY ANALYSIS REPORT;
  - AS-BUILT DESIGN OF THE PLANT;
  - THE RESULTS OF PRE-OPERATIONAL TESTS;
  - THE OPERATIONAL LIMITS AND CONDITIONS;
  - THE SPECIFIC OPERATIONAL LIMITS AND CONDITIONS FOR OPERATION DURING THE COMMISSIONING OF THE PLANT FROM FIRST CRITICALITY TO FULL POWER;
  - THE ADEQUACY OF SAFETY SIGNIFICANT OPERATING PROCEDURES AND INSTRUCTIONS, INCLUDING EMERGENCY OPERATING PROCEDURES AND ACCIDENT MANAGEMENT PROCEDURES;
  - THE STAFFING AND MANAGEMENT STRUCTURE OF THE PLANT AND ARRANGEMENTS FOR ENSURING THAT QUALIFICATION AND TRAINING ARE PERFORMED;
  - THE ARRANAGEMENT FOR QUALITY MANAGEMENT FOR ALL COMMISSIONING, OPERATION AND MAINTENANCE ACTIVITIES;

Preparation for Commissioning License

- **BEFORE FUEL LOADING AND INITIAL CRITICALITY**
  - THE RADIATION PROTECTION PROGRAMME;
  - ON-SITE EMERGENCY PREPAREDNESS AND RESPONSE;
  - THE ARRANGEMENT FOR COMMISSIONING ACTIVITIES AND OPERATION ACTIVITIES;
  - THE ARRANAGEMENT FOR CONFIGURATION CONTROL, ESPECIALLY CONTROL OF PLANT MODIFICATIONS;
  - THE ARRANGEMENTS FOR THE MANAGEMENT OF SPENT FUEL AND RADIOACTIVE WASTE;
  - THE STATUS OF STORAGE FACILITIES FOR NUCLEAR MATERIAL;
  - THE FULFILMENT OF THE APPLICABLE REQUIREMENTS IN RESPECT OF ARRANGEMENTS FOR ACCOUNTING FOR AND CONTROL OF NUCLEAR MATERIAL AND RADIOACTIVE MATERIAL.

Conclusions

- AS per BAERA ACT-2012 BAERA is an Independent Regulatory Body to oversight of RNPP program.
- BAERA's licensing requirements and licensing steps are fully consistent with IAEA SSG-12, SSG-16.
- Bangladesh is fully committed to be a party of all the international legal nuclear instruments.
- Siting license, Design and Construction Licenses for Unit 1 and 2 were issued.
- Several approvals were also issued for installation of major safety related SSCs.
- Notifications are being issued to continue supervising activities of RNPP program.
- BAERA is continuously supervising the licensee's activities for ensuring safety of the worker, people and environment.

Thank Your for Your

Kind Attention!!