FNCA Ministerial Level Meeting
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Country Report
Bangladesh

Presented by:

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Radiation technology utilization in Human Health in Bangladesh

- **Government of Bangladesh has been struggling in meeting the basic needs of its people and health care is one of them**
- **Cancer management is a priority due to the current trend of increased incidence in Bangladesh**
- **Government has established National Institute of Cancer Research and Hospital which started its activities in 1992 and radiation facility installed there in 1995**
- **Combined effort of government and private sector have been working in cancer management**
- **At present Bangladesh have 24 LINAC and 04 Brachytherapy machines in function in 19 Governmental and nongovernmental Institutes and Hospitals**

Radiation technology utilization in Human Health

Serial No.	Governmental Hospitals and locations	LINAC	Brachy-therapy
1	National Institute of Cancer Research and Hospital, Dhaka	04	-
2	Dhaka Medical College and Hospital, Dhaka	01	-
3	Bangabandhu Sheikh Mujib Medical University, Dhaka	01	-
4	Chittagong Medical College and Hospital, Chattagram	-	Co-60 (1)
5	Rajshahi Medical College and Hospital, Rajshahi	-	Co-60 (1)
6	Sylhet MAG Osmani Medical College and Hospital, Sylhet	-	Co-60 (1)
7	Mymensingh Medical College and Hospital, Mymensingh	-	Co-60 (1)
8	Shaheed Ziaur Rahman Medical College and Hospital, Bogra	01	-
Total		07	04

Radiation technology utilization in Human Health

Serial No.	Other Hospitals and locations	LINAC
1	National Institute of Nuclear Medicine and Allied Sciences (NINMAS), Dhaka (BAEC)	01
2	Nuclear Medical Physics Institute, Dhaka (BAEC)	01
3	Combined Military Hospital, Dhaka	01
4	Delta Medical College and Hospital Ltd., Dhaka	02
5	United Hospital Ltd., Dhaka	02
6	Khawja Younus Medical College & Hospital, Sirajgonj	02
7	Square Medical College and Hospital, Dhaka	01
8	Ahsania Mission Cancer and General Hospital, Dhaka	04
9	North-East Medical College and Hospital, Sylhet	01
10	Enam Medical College and Hospital, Dhaka	01
11	Applo Hospital Ltd., Dhaka	01
Total		17

Radiation technology utilization in Human Health

Challenges:

- **Only 19 Governmental & private Hospitals are managing cancer patients but the number should be at least 160 (WHO)**
- **Governments needs to allocate higher budget to establish new hospitals and procure machines for cancer management**
- **Government should encourage private sector to establish private hospitals for cancer management**
- **Necessary to develop Human Resources for better function**

Roles and challenges in FNCA Oncology Project

- **FNCA Workshop on Radiation Oncology was held from 4 to 7 November, 2018 in Dhaka, Bangladesh**
- **It was co-organized by BAEC, Oncology Club and the MEXT**

- **Significant number of patients are enrolled in all the FNCA protocols (Ceravix-I, II, III and IV; NPC I & II; Brest cancer I & II) from Bangladesh**
- **Disseminating the protocols in the centers of the country in improving and standardizing the quality of cancer care and combining seniors & juniors in bringing momentum to the project at the National Level**
- **Facing challenges such as inadequate treatment facility and trained manpower,; hard to coordinate between Government & private hospitals; absence of treatment protocol for common cancers; slow research initiative at National Level, etc.**

Nuclear Energy Technology

Planned Manpower for Operating Organization of Rooppur NPP

Category	Description of Categories	No of Personnel	No of Personnel
Key personnel to be trained by the Contractor (Russian Federation) in the frameworks of the General Contract.	**Personnel to be licensed for operation and maintenance**	**116**	1424
	Personnel who provide reactor plant operation, perform the works related to fuel handling, radioactive waste and substances handling	372	
	Common-industrial personnel who provide production electrical and thermal energy.	936	
Common industrial personnel as well as general supporting staffs will be trained by the Bangladesh Atomic Energy Commission's (BAEC) trained instructors in Bangladesh as required.	Common-industrial personnel who provide the NPP functioning, production of electrical and thermal energy.	572	1111
	Administrative personnel	236	
	General Supporting Staff	303	
Sub-Total		**2535**	**2535**
Personnel for Headquarter of NPCBL		165	
Total		2700	

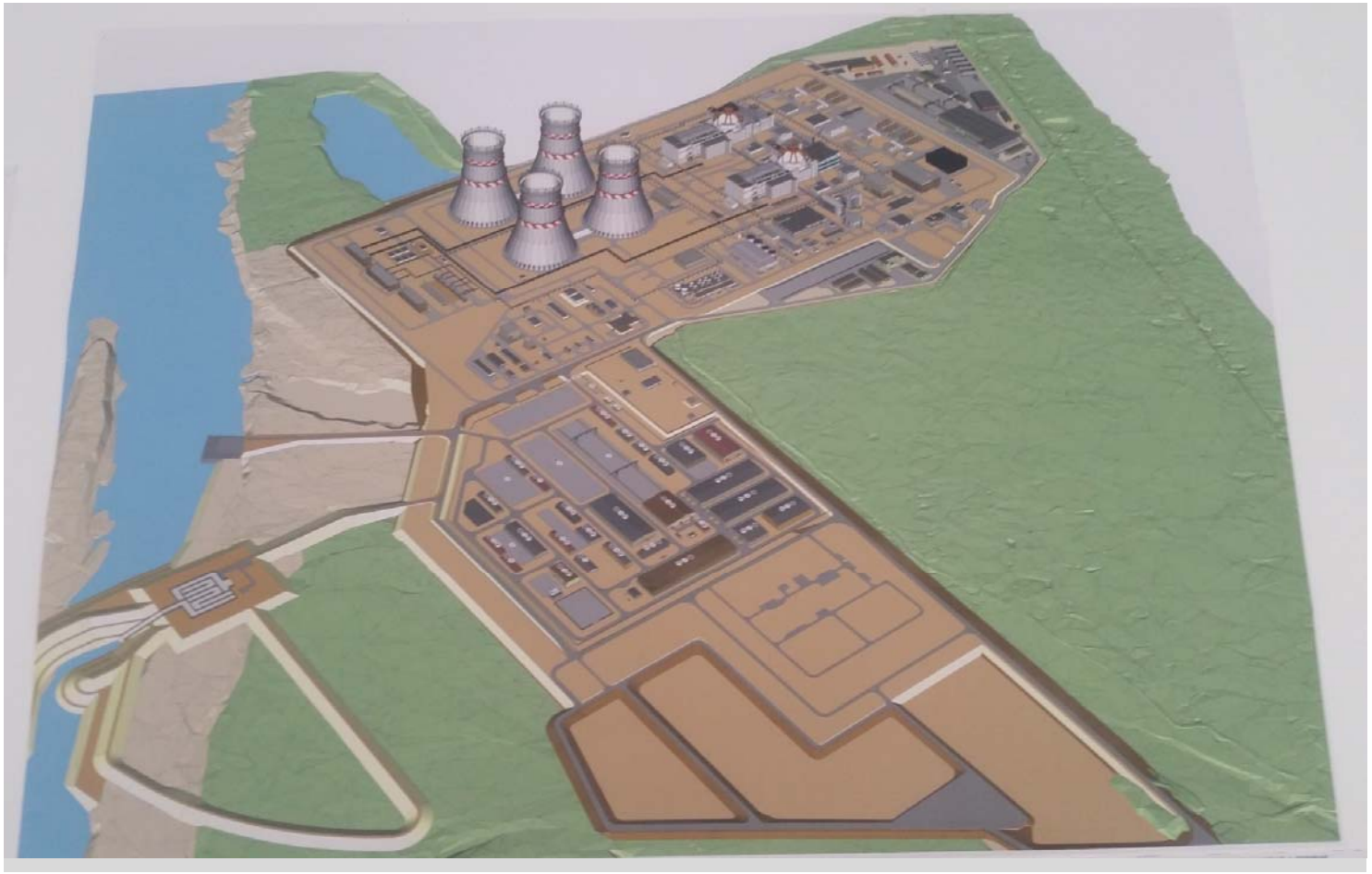
Status of HRD in the nuclear energy technology (RNPP)

Among 2700 manpower 1424 were planned to trained up through vendor country according to the following schedule

- **Moreover, 47 personnels were sent to MEPhI, Russia to carry out higher study on design and Physical Protection of RNPP**

Year	Number of Trainee
2017	59
2018	93
2019	259
2020	390
2021	537
2022	86
Total	1424

Layout of Rooppur RNPP



Current Status of Project Implementation

- Obtaining a license for Unit 1 construction (02.11.2017);
- First concrete of foundation plate of Reactor Building, Unit 1 (30.11.2017)

- Obtaining a license for Unit 2 construction (08.07.2018);
- First concrete of foundation plate of Reactor Building, Unit 2 (14.07.2018)
- Installation of Molted Core Catcher Vessel, Unit 1 (19.08.2018)
- Initiation of 10UMA foundation concreting (30.08.2018)
- Initiation of 10UKC foundation concreting (30.04.2018)

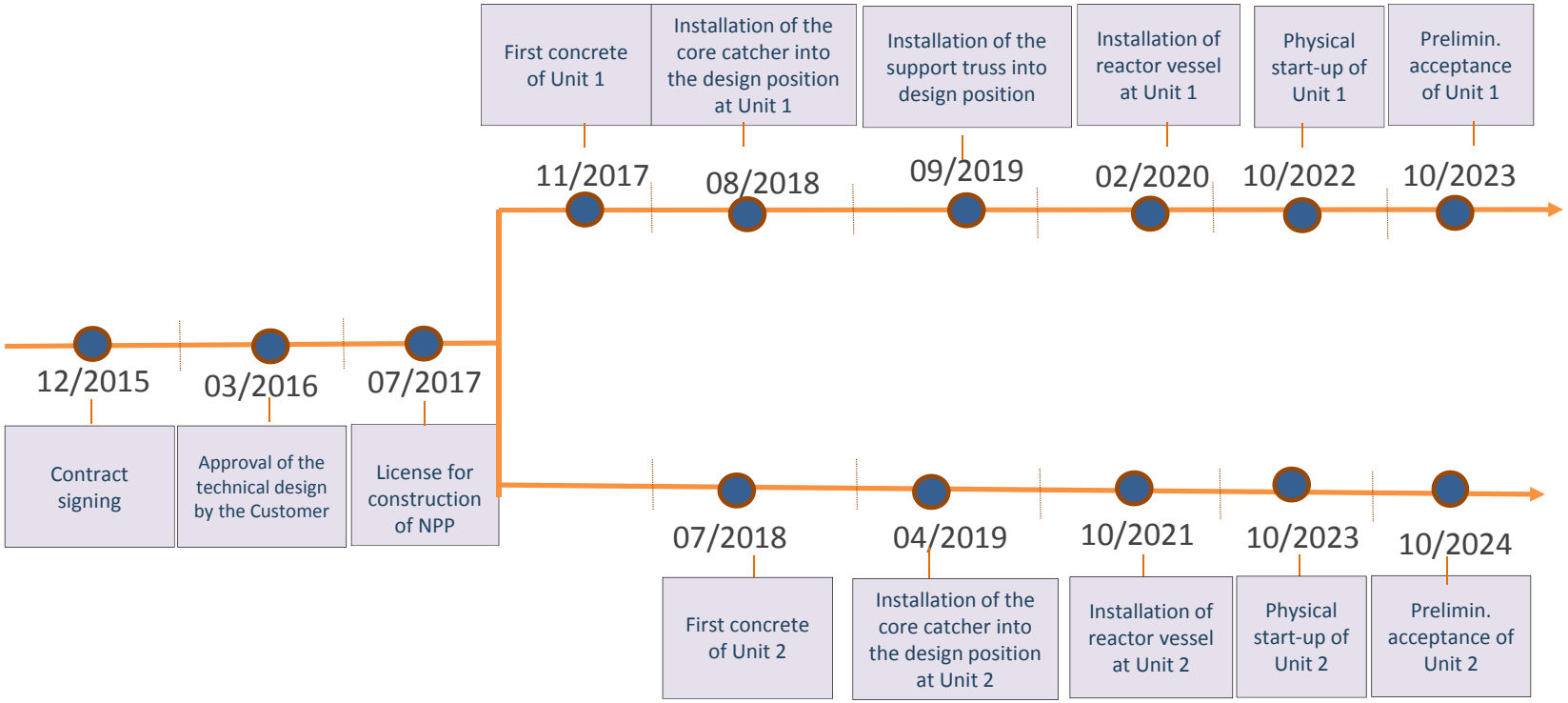
- Initiation of installation of Molted Core Catcher Vessel, Unit 2 (30.05.2019)
- Initiation of 20UMA foundation concreting (10.05.2019)

Obtaining Design & construction license for the 1st and 2nd units

Prime Minister Sheikh Hasina inaugurated the concrete pouring work of the 1st and 2nd unit of RNPP

General information on the project Power units 1,2

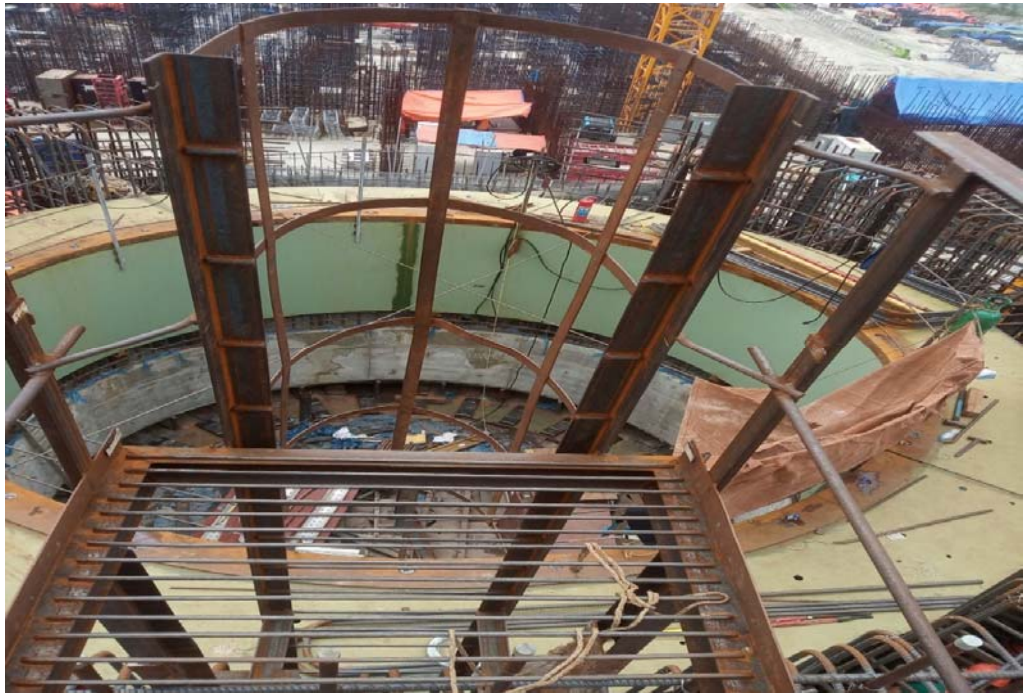
Key project milestones:



Reactor Building (10UJA): Cavity Wall

Reactor Cavity at elevation +7 meter on 17.8.2019

Reactor Building (10UJA): Cavity Wall



At +7 meter level unit-1

Reactor Building of Unit-2 (20UMA)

First Concrete. Foundation Plate

Start of Works – July 2018

End of Works – October 2018

Concrete Volume – 13 647 m^3

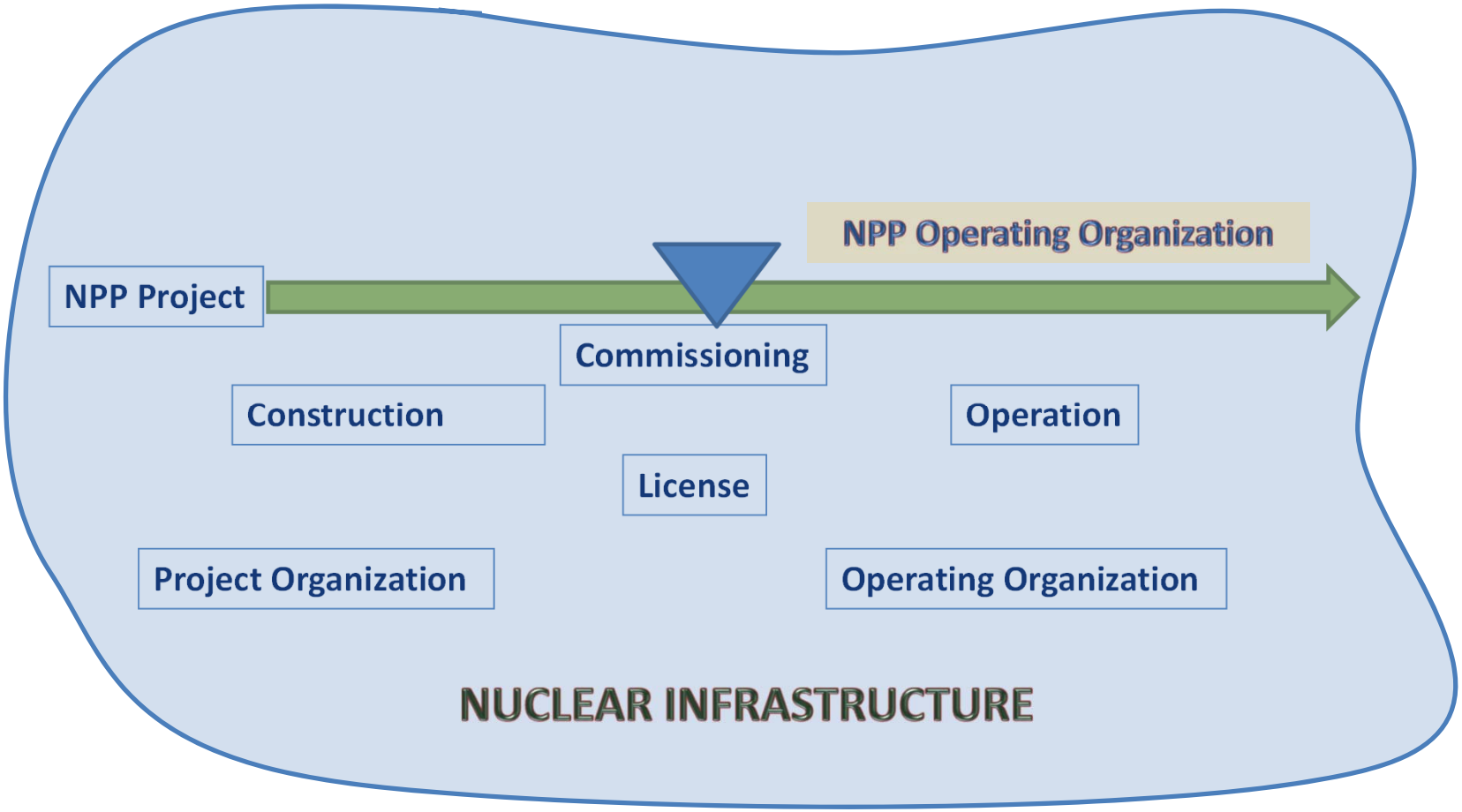
Installation of Molten Core Catcher Vessel

Molten core catcher weight – 145 t

Completed – May 2019

Construction of Units 1 and 2 of Rooppur NPP, August 19

Transition from Project Organization to an Operating Organization



Thank you very much for your kind attention