FNCA 2009 Workshop on Human Resources Development

Country Report of the Philippines

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INTRODUCTION

It is deeply recognized that energy is indispensable to the Philippine economic growth and to country's drive towards global competitiveness. Thus, the Philippine Energy Plan provides for the accelerated exploration and development of indigenous energy resources to reduce vulnerability to high oil prices, intensified use of renewable energy resources and alternative fuels for a cleaner environment, among others.

A major addition to the Plan is the consideration of the viability of the nuclear power as a long-term policy for clean energy option. As stated in the Plan, in the immediate term, the emphasis will be on building the requisite human resource capability and preparing the substantive frame-work and technical aspects of a nuclear power program.

In pursuit of the Plan, the Department of Energy and the Department of Science and Technology issued a Joint Department Order early this year, creating an Inter-Agency Core Group for the Study of Nuclear Power to look into nuclear power as a long-term option.

A bill providing for the creation of a separate nuclear regulatory body has been filed in the Lower House of Congress. Another bill providing for the rehabilitation of the Bataan Nuclear Power Plant (BNPP) has also been filed in the Lower House.

In its present form, the bill provides for the conduct of feasibility studies to determine the economic and technical viability of the BNPP. The National Power Corporation signed with the Korea Electric Power Company on Cooperation a non-binding Memorandum of Understanding (MOU) for Cooperation for a Feasibility Study on the Rehabilitation of the BNPP.

The PNRI

The Philippine Nuclear Research Institute (PNRI) is the sole agency of the government mandated to develop and regulate the safe and peaceful applications of nuclear science and technology in the Philippines. The PNRI is tasked to provide training courses, through its Nuclear Training Center (NTC), in nuclear science and technology to different groups such as science educators, medical practitioners, engineers, researchers, and technicians. The PNRI has been the center of nuclear science and technology activities in the Philippines since 1958.

HUMAN RESOURCES DEVELOPMENT (HRD) AT PNRI

The training program of the PNRI aims to familiarize participants with the fundamentals of nuclear science and technology, the basic principles of radiation protection, and the peaceful applications of nuclear technologies in agriculture, medicine, industry, research and the environment.

Most of these courses are conducted at the premises of PNRI. The NTC is equipped with facilities needed for the conduct of different courses. The facilities of the other research and service units in PNRI are also made available to the participants. For some courses, PNRI collaborates with other private companies, government agencies, schools, universities, and hospitals so that the participants can have access to their unique instruments, equipment, and facilities.

For this year 2009, the NTC has included in its list, a series on introduction courses on nuclear power.

In the mainstream of national development, HRD is given priority in the aspect of continually improving individuals involved in the work and for the organizations to continue to grow.

The PNRI training program for 2009 has been grouped into three, as follows:

A. Nuclear Training Courses

No.	Course Title	Duration	No. of Courses offered this year
1	Seminar in Nuclear Science for High School Science Teachers	5 weeks	1
2	Course on Nuclear Technology for University and College Faculty	5 weeks	1
3	Radioisotope Techniques Training Course (Medical Applications)	4 weeks	2
4	Safety in the Use of Nuclear Equipment and Devices Training Course	5 days	10
5	Radiation Safety Officer Training Course	10 days	1
6	Radiation Safety Officer Refresher Course	3 days	1
7	Radiation Safety Course for Medical and Radiopharmaceutical Facilities	10 days	1
8	Radiological Health and Safety Course for Industrial Radiographers	10 days	1
		T O T A L	18

B. Non-Destructive Testing (NDT) Training Courses

No.	Course Title	Duration	No. of Courses offered this year
1	Liquid Penetrant Testing – Level 2	5 days	3
2	Magnetic Particle Testing – Level 2	5 days	3
3	Ultrasonic Testing – Level 2	10 days	4
4	Radiographic Testing – Level 2	10 days	4
5	Eddy Current Testing – Level 2	10 days	2
6	Seminar on Radiographic Interpretation	3 days	3
7	Welding Inspectors Course	5 days	4
8	Course on NDT in Concrete	10 days	1
		T O T A L	24

C. Series of Introduction Courses on Nuclear Power

No.	Course Title	Duration	No. of times offered this year
1	Introduction to Nuclear Power Training Course (Module 1)	3 days	4
2	Introduction to Nuclear Engineering Training Course (Module 2)	10 days	3
3	Introduction to PWR and the Overall Description of BNPP-1 (Module 3)	10 days	3
		T O T A L	10

TRAINING NEEDS AT PNRI

In preparation for the nuclear power option by 2025, the PNRI training needs are in the field of nuclear engineering.

The use of enhanced university programs, performance-based training, and continuous technical training are the key elements in managing human resources in nuclear organizations.

AGENDA OF THE WORKSHOP

(1) Strategy and implementation of human resource development

a. provide a series of introduction courses on nuclear power at the Nuclear Training Center of PNRI

b. use of enhanced university programs and performance-based training overseas

(5) HRD necessary for introduction of nuclear power

a. design and construction engineers (50 people)

b. operation and maintenance engineers (50 people)

TABLE 1.

Needs				Need Satisfaction		
				Title/ Details	National Program	International Program
No. 1	Priority *	Field	D		PNRI	MEXT Nuclear Researchers Exchange Program
		Target	Engineers	Method	Lecture	University Education
		Number (People)	100	Number (People)	100	2
		Comment	Operators/ Inspectors	Period	1 month	12 months

Needs				Demand for Program		
				Title/ Details	National Program	International Program
No. 1	Priority *	Field	D		None	MEXT and other Fellowship Programs
		Target	Engineers	Method	None	OJT
		Number (People)	100	Number (People)	None	100
		Comment	Operators/ Inspectors	Period	None	12 months

TABLE 2.

HRD National Plans						
(1) strategy and implementation of HRD				In 5 years	Train 100 engineers at NTC , PNRI Train 30 engineers overseas	
				By 2020	Train 100 engineers overseas	
				By 2030	Maintain competence of workforce by continuous training	
(5) HRD necessary for introduction of nuclear power				In 5 years	Train 100 engineers at NTC , PNRI Train 30 engineers overseas	
				By 2020	Train 100 engineers overseas	
				By 2030	Maintain competence of workforce by continuous training	
Needs				Expected Program		
				Title/ Details	National HRD Program	International HRD Program
No. 1	Priority *	Field	D		Introduction Courses	MEXT and other Fellowship Programs
		Target	Engineers	Method	Lecture	OJT
		Number (People)	100	Number (People)	100	100
		Comment	Operators/ Inspectors	Period	1 month	12 months

TABLE 3.

(2) Priority area of HRD and on-going national HRD program including activities of national training center (Need) a. provide a series of introduction courses on nuclear power at the NTC of PNRI b. send 100 engineers overseas for OJT
(3) Roles of international cooperation such as FNCA for national HRD Program a. provides support to member countries to cover university education, OJT and short-term training b. updates present status on national HRD program
(6) Roles of nuclear research institute in HRD necessary for introduction of nuclear power a. provide a series of introduction courses on nuclear power b. perform safety assessment of nuclear power plant
(7) Improvement of ANTEP in connection with MEXT Nuclear Researchers Exchange Program a. establish a training center b. provide assistance to a greater number of researchers for university education, OJT, and short-term training

TABLE 4.

(4) Progress and Implementation Plan of ANTEP						
No.	Field	Program Title	Organizer	Specification	Implementation Timing	Type of Training
1	D	Nuclear Researchers Exchange Program 2009	MEXT	Nuclear Power Reactors	August 2009 to July 2010	University Education
2	D	Nuclear Researchers Exchange Program 2009	MEXT	Nuclear Power Reactors	October 2009 to September 2010	University Education

(4) Progress and Implementation Plan of ANTEP (continuation of Table 4)						
No.	Duration	Acceptable persons per year	Language	Note/Required technical background	Allowance, in kind contribution	URL
1	12 months		English	Engineering degree	Air ticket Accommodation Daily allowance	
2	12 months		English	Engineering degree	Air ticket Accommodation Daily allowance	