



РОСАТОМ

ГОСУДАРСТВЕННАЯ КОРПОРАЦИЯ ПО АТОМНОЙ ЭНЕРГИИ «РОСАТОМ»

Infrastructure for Nuclear Newcomers. Risks. Legislative Support. International Cooperation. Challenges.

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**ATOMEXPO
07 June 2011
Moscow, Russia**



Technical Meeting

Topical Issues on Infrastructure Development:

Managing the Development of National Infrastructure for Nuclear Power

Vienna 9-12 February 2010-02-09

Group:1

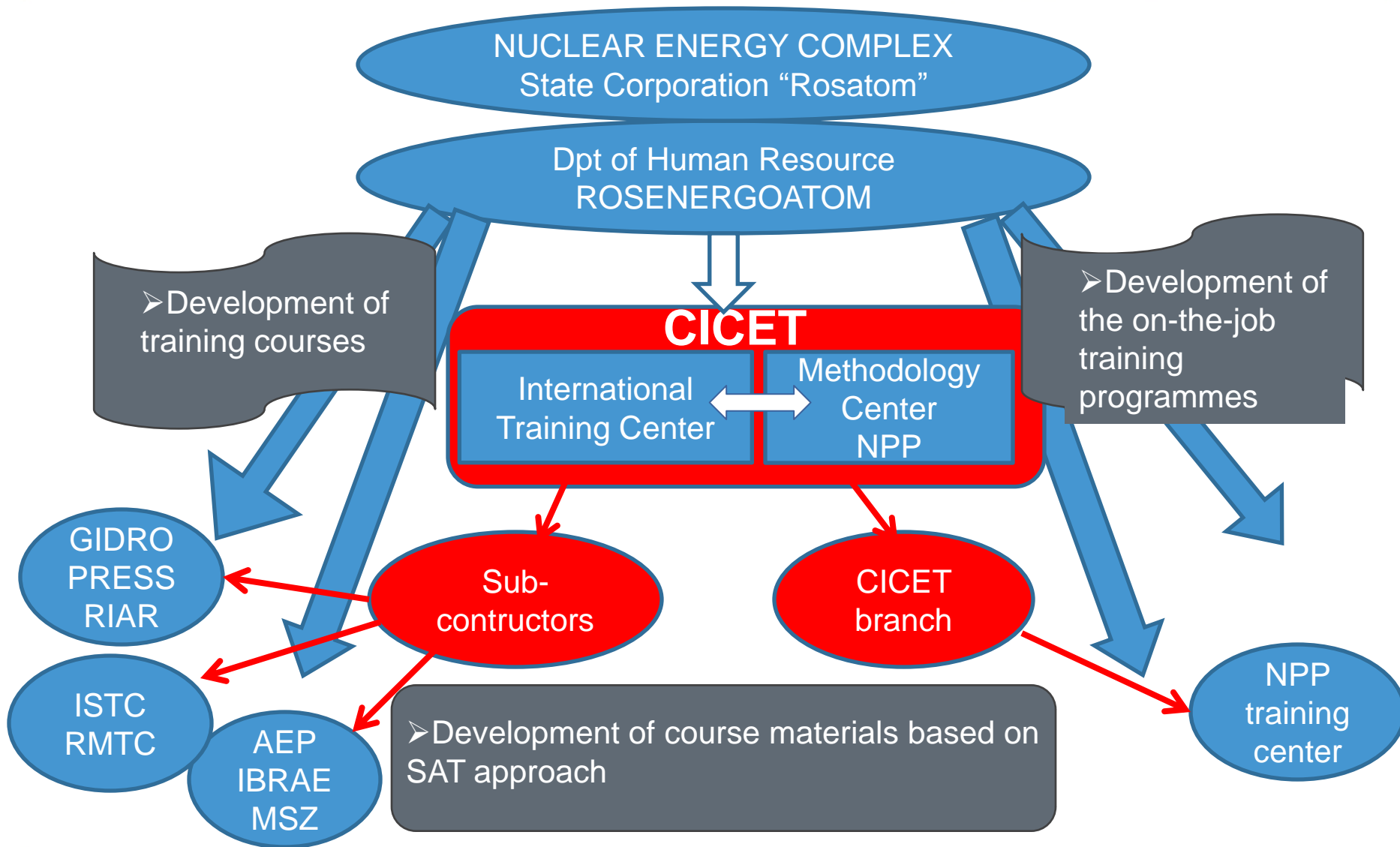
NPP VENDOR PROSPECTIVES

EXPERIENCE ,LESSON LEARNED and RECOMMENDATIONS

The first priority is to provide mechanism of HR development for national nuclear infrastructure

1. Vendor should provide a Vision to the New Comer
2. The new comer countries need additional information in terms of seminars, trainings & courses from vendors.
3. The information regarding Operators and Regulators should be provided by Vendors or the corresponding organisation of the country of the Vendor
4. The local professional institutes should be involved to impart knowledge as per vendors requirements
5. New Comer countries want proven technologies
6. The cost of NPP must be discussed per technical requirements of the country depending on what they actual want

Russian organizations involved in training course development





Typical Arrangement of Training

23 November	24 November	25 November	26 November	27 November	28 November	29 November	30 November	01 December	02 December	03 December	04 December	05	06	07	08	09	10	11	12 December
Arrival	Training 10 AH*	Training 10 AH	Training 10 AH	Training 10 AH	Holiday	Training 10 AH	Training 10 AH	Training 10 AH	Training 10 AH	Training 10 AH	Training 10 AH	December							Departure
												Practical experience Balakovo NPP (by train)							

*AH– Academic Hour (45 min.)

Totally 100 AH



Awarding the Certificates to the specialists from Nuclear Power Plant Authority- Egypt



Courses:
bid invitation
Site selection&specification
(27 August 2010)



Courses:
Fuel design
Physical protection&security
(10 December 2010)

Totally 42 trainees in 2010

Example on cooperation mechanism (the case of Bangladesh)



(1) Visiting CICET, August 2010, Preliminary agreement on the scheduling



(2) Shaping the programme

No	Blocks and topics	Total, hours
	February 2011 2	
1	Introduction in VVER technology	2
2	Preparation of the project documentation for the NPP construction	2
3	Project "AES-2006" with the reactor VVER-1200. Basic technological solutions	6
4	General plan for the first two power units of LNPP-2	2
5	Architectural and layout solutions of LNPP-2	2
	Safety concept of the nuclear power plant	2
	Project management in the NPP construction	8
	Technical tour to LNPP-2	8
	Technical tour to Atomexpo	8
	Guidelines for quality and reliability assurance programmes	8
Total		48

(3) Official request for visit from the IAEA to Rosatom, March 2011



The Secretariat of the International Atomic Energy Agency presents its compliments to the Rosatom State Atomic Energy Corporation, Moscow, and is enclosing herewith the application forms of the following candidates who have been awarded a scientific visit under the Agency's Technical Cooperation Programme and recommended for placement in Russian Federation:

(4) Tentative schedule 30 May – Arrival 07 June - Departure

2 June 2011
StPetersburg Branch of CICET

“Project management for NPP under construction”

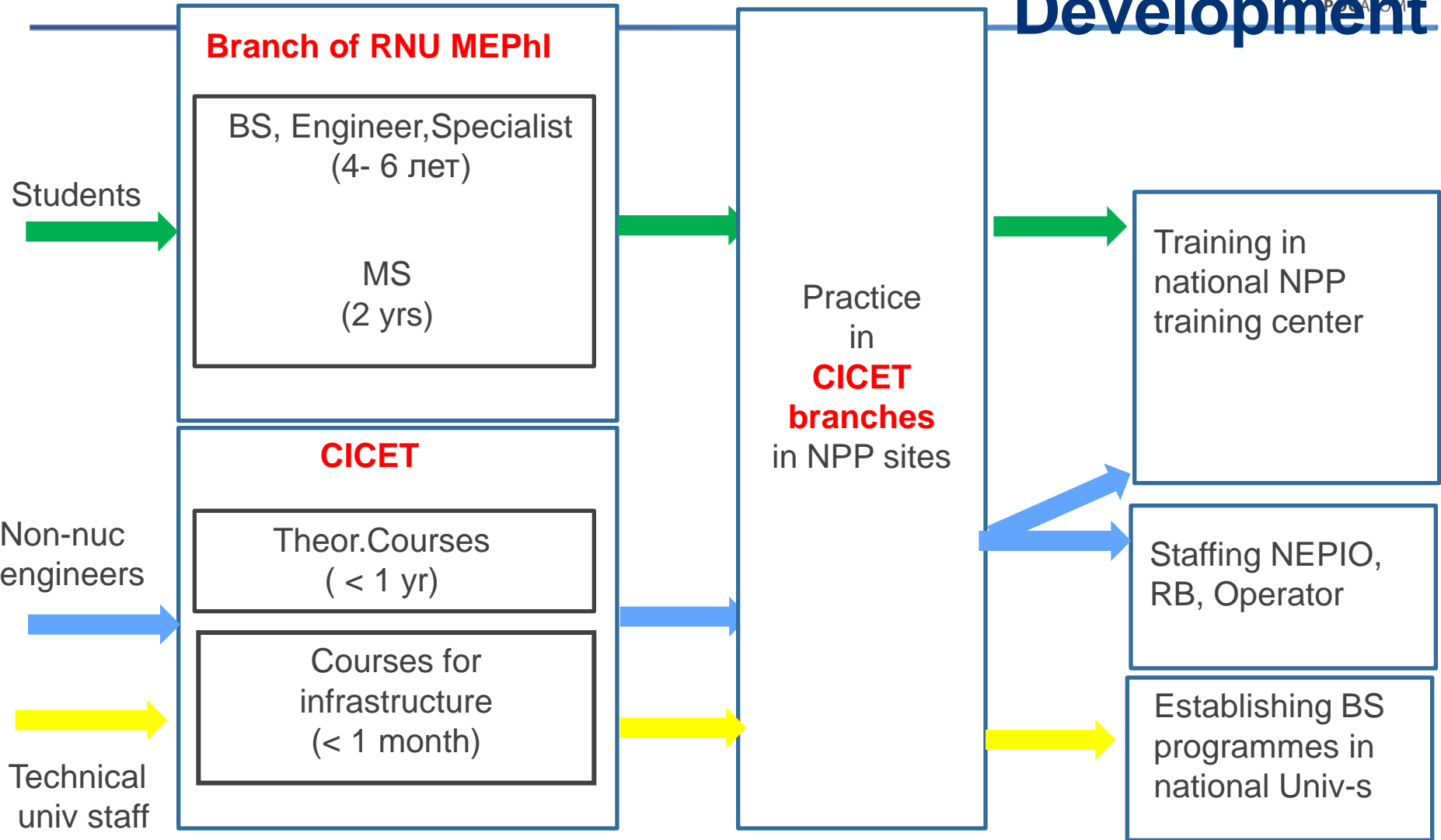


CICET List of the courses for infrastructure development



No	Title
1	Introduction in Russian nuclear technology (PR issues)
2	Preparation of the Bid invitation for the first NPP
3	Site selection&specification
4	Characteristics&design of nuclear fuel, including safety margins
5	Security & physical protection of NPPs
6	Non-proliferation of nuclear materials
7	Regulatory body (in cooperation with Russian Regulatory Body.)
8	Russian computer codes for safety analysis
9	Out-of-the-reactor-shop-equipment: quality requirement, control, assurance and maintenance
10	Uranium geology, chemistry and fuel fabrication
11	Research reactors (isotope production and medical applications)
12	Research reactors: complex engineering inspections
13	NPP construction project management
14	Emergency Preparedness and Safety Assurance During Transportation of Radioactive materials
15	Waste management
16	GEN-IV reactors
17	Small Power Reactors
	Courses oriented for NPP staff:
18	Reactor island: physics& equipment for engineers
19	Turbine Island: thermohydraulics&equipment for engineers
20	Water chemistry
21	Electrical equipment and integration of NPP into the grid
22	Control and measurement system

Principle Schemes of HR Development



Issues:

To prepare guide-document on-how-to-communicate-with-TC-Dpt-
in-planning-training-activity

To develop glossary on Infrastructure (e.g. “soft coordination”))

Concerns:

Budget (500US\$ to host organization pre week*person)

Challenges:

Culture difference