

Program of the Industry Conference
« Closed Nuclear Fuel Cycle on the Basis of Fast Neutron Reactors»
(Tomsk, 11-12 October, 2018)

The industry conference «Closed Nuclear Fuel Cycle on the Basis of Fast Neutron Reactors» is a logical continuation of the FR-17 conference and an element of the unified information and organizational environment of the new technological platform of nuclear power. At the conference the participants of Proryv Project, representatives of Federal authorities and regulators, industry experts and partners are invited to discuss the issues of key scientific and technological developments, the achieved technological superiority in the areas of the project and the competitiveness of the developed solutions.

The purpose of the conference: formulation and discussion of issues and problems of new nuclear power technologies in prospect for the next decade, including in comparison with other types of generation, the creation of an expert platform for the exchange of information on the national program on CNFC and fast neutron reactors.

Participants: management of ROSATOM and its subsidiaries, the heads of the responsibility centers of Proryv Project, employees of the nuclear industry organizations participating in the project, as well as representatives of state authorities, scientific and business experts, representatives of partner organizations.

Program of the Industry Conference
 «Closed Nuclear Fuel Cycle on the Basis of Fast Neutron Reactors»

Thursday 11 of October, 2018	
09:30	Registration, welcome coffee
Strategic unit: ROSATOM paradigm and key reports	
10:00-10:30	Conference opening. ROSATOM management welcome speech
10:30-10:55	Vyacheslav Pershukov, Head of Proryv Project line-of-business – Special Representative for International Scientific and Technical Projects National Project «Proryv»: International Positioning and New Prospects
10:55-11:20	Valeriy Rachkov, Research and Development Chief Scientific Officer of Proryv Project «Scientific and Technical Problems of CNFC in Two-Component»
11:20-11:45	Leonid Bolshov, Director at the Nuclear Safety Institute of the Russian Academy of Sciences Alexey Ferapontov, Deputy Chairman of the Federal Environmental, Industrial & Nuclear Supervision Service of Russia (Rostekhnadzor) «Regulatory Framework of the New Technological Platform of Nuclear Power»
11:45-12:10	Ekaterina Solntceva, Digital-Director of ROSATOM «The tasks of digitalization of ROSATOM»
12:10	Coffee break
The Issues of Implementation of Proryv Project: Key Technology Alternatives, Solutions, and Hallmark of Technology Excellence	
12:30-12:50	Eugene Muraviev, Head of Analytics Department, Innovative Technological Center of the «Proryv» Project «Two-Component Nuclear Power Optimization»
12:50-13:10	Pavel Alexeev, Director of Sciences of the Kurchatov Complex of Perspective Nuclear Energy, National Research Center «Kurchatov Institute» «Possible Scenarios for Transition to a CNFC»
13:10-13:30	Andrey Gulevich, Deputy CEO, JSC «SSC RF – IPPE» «Role of Fast Sodium Reactors in Nuclear Fuel Cycle Closure of NPPs»
13:30-13:50	Dmitriy Tolstoukhov, Chief Economist of the Proryv Project Sergey Panov, Head of Economic Modeling, Innovative Technological Center of the «Proryv» Project «Competitiveness of NPP Projects with Fast Reactors:

	Requirements and Implementation in «Proryv» Project»			
13:50-14:10	Andrey G. Glazov, Chief Designer of On-site Nuclear Fuel Cycle (NFC) «Equipment of Fuel Fabrication and Refabrication Complex Technological Lines. Basic Design Solutions»			
14:10	Lunch			
15:00-15:20	Aleksandr Zherebcov, Head of Department of Chief Technology Officer, Innovative Technological Center of the «Proryv» Project «Development of Conceptual Project CNFC Industrial Complex»			
15:20-15:40	A. Maksimov, Head of Department, Innovative Technological Center of the «Proryv» Project «Integrating Project and Information Model of PDEC»			
15:40-16:00	N.A. Mosunova, Deputy Scientific Manager of the Center of Responsibility of the «Codes of New Generation» Project, IBRAE RAN «Codes of New Generation – State of the Art and Perspectives of the Future Development»			
16:00	Coffee break			
16:20-16:40	Dmitry Bondarenko, Head of Department of IT-Environment and Information Support, Innovative Technological Center of the «Proryv» Project «Common Information Space of «Proryv» Project			
16:40-17:00	Andrey Fedorovsky, Head of Mathematical Modeling Department, Innovative Technological Center of the «Proryv» Project «Development and Application of the Integrated Calculating Mathematical Model of PDEC»			
17:00-17:20	E. Osochenko, Head of the Project Office «Digital Transformation of the Industry» Mapping of Scientific and Technical Resources as a Tool for Managing the State Program (on the example of the choice of leading research centers for cross-cutting technologies)»			
17:20-17:40	Nikolay Mantsevich, Head of Innovation Management, JSC Science and Innovations «Digital Platform of Scientific & Technical Capabilities»			
17:40	Questions and discussion. Summary of the first day			
18:00	Dinner			
Friday, 12 of October, 2018				
09:00-13:00	Work in sections			Tech tour to SKhK (PDEC)
	Section 1 «Breakthrough. Team of the future»	Section 2 «Fast reactors»	Section 3 «Technology of fuel fabrication and SNF	

			reprocessing»	
13:00	Lunch			
14:00-15:30	Plenary meeting. Reports on the results of section work. Proposals to the conference minutes			
15:30-16:00	Summary of the conference			

Program of the youth section № 1
«Breakthrough. Team of the future»

Tasks:

- The analysis of the current status of providing the project with young professionals (based on the pre-analytical phase prior to the conference);
- Analysis of the tools for the development of competencies for young professionals in the project (scientific schools, lift for thesis works, publication activity, participation in international conferences);
- Preparation of proposals (in a conference Memorandum) for the development of tools training and development scientific teams in the interests of the CNFC.

Moderators:

V.V. Artisuk, Pro-Rector of International Cooperation, Rosatom Technical Academy;
P.V. Sushkov, Head of Education Programs, «Science and Innovations» JSC.

09:00-09:15	Session opening Moderators: V.V. Artisuk, Pro-Rector of International Cooperation, Rosatom Technical Academy P.V. Sushkov, Head of Education Programs, «Science and Innovations» JSC
09:15-09:30	P.V. Sushkov, Head of Education Programs, «Science and Innovations» JSC Representative of Innovative Technological Center of the «Proryv» Project «Assessment of human resources requirements for implementation of the tasks of BN CNFC»
09:30-10:15	The tasks of training qualified specialists in the relevant universities
09.30-09.45	A. Lavrukhin, Deputy Head of Chair «CNFC Technology», National Research Nuclear University MEPhI «Experience in Implementing an Educational Program Aimed at Training Personnel for the Proryv Project at National Research Nuclear University MEPhI»
09.45-10.00	A. Zhiganov, Head of the Center for Fast Energy, National Research Nuclear University MEPhI «Personnel Training for the Proryv project at Seversky Technological Institute of National Research Nuclear University MEPhI»
10:00-10:15	O. Dolmatov, Director of the Engineering School of Nuclear Technology, Tomsk State University «Approach to the Training of Young Specialists of the New Generation in Tomsk State University»
10:15-11:00	The environment to attract and develop young professionals. Benchmarking

10:15-10:30	Valentin Smirnov, Director of Sciences, NIITFA Scientific And Research Institute Of Technical Physics And Automation «Experience of the Project «Higher school of physics of ROSATOM» on Development of Scientific and Technical Competences in the Field of Experimental and Theoretical Physics»
10:30-10:45	M. Lipeckaya, Director of the Center for Strategic Development «School of key researchers of Tomsk region»
10:45-11:00	G. Tikhomirov, Deputy Director of Institute of Nuclear Physics and Technology National Research Nuclear University MEPhI «Experience of Projects on Attraction and Development of Young Professionals in International Scientific and Technological Programs»
11:00	Coffee break
11:30-11:50	V.V. Artisuk, Pro-Rector of International Cooperation, Rosatom Technical Academy «Competence of Researchers in Ensuring Global Leadership of Russian Nuclear Technologies»
11:50-13:00	Session participants «Discussion of proposals for the development of training tools, recruitment and development of young professionals in the field of fast reactors CNFC»

Program of Section № 2
«Fast reactors»

Tasks:

- Presentation of technical solutions and technologies in the field of fast reactors.
- Discussion of technological alternatives, solutions, and hallmark of technology excellence

Moderators:

Vadim Lemekhov, Chief Designer of the Proryv Project;

Yuriy Khomyakov, Head of Division of Research and Development Chief Scientific Officer, Innovative Technological Center of the «Proryv» Project.

09:00-09:30	Vadim Lemekhov, Chief Designer of the Proryv Project «The Power Unit with Reactor BREST-OD-300»
09:30-10:00	V. Ershov, Chief Expert on Designing of NPP with BN reactors, ATOMPROEKT JSC «The Power Unit with Reactor BN-1200M»
10:00-10:20	Yuriy Khomyakov, Head of Division of Research and Development Chief Scientific Officer, Innovative Technological Center of the «Proryv» Project «Physics of New Generation Fast Nuclear Reactor and R&D Program on its Justification»
10:20-10:40	Vladimir D. Risovany, Deputy CEO JSC «Science and Innovations» «Radioisotopes in Fast Neutron Nuclear Reactors»
10:40-11:00	Mikhail Mikhaylov, First Deputy Director – Designer General, NIKIET, JSC» «I&C for NPP on the basis of home-grown technology»
11:00	Coffee break
11:20-11:40	Elena A. Rodina, Senior Researcher, Innovative Technological Center of the «Proryv» Project «Justification and Optimization of Fast Reactor Transition to Closed Nuclear Fuel Cycle Operation»
11:40-12:00	Alexander Orlov, Adviser of Research and Development Chief Scientific Officer of Proryv Project, Innovative Technological Center of the «Proryv» Project «Lead Coolant Technology for the BREST-OD-300 Reactor Unit»
12:00-12:20	Vladimir D. Risovany, Deputy CEO JSC «Science and Innovations» «Burning Minor Actinides in Fast Nuclear Reactors»
12:20-12:40	A. V. Zakharov, Leading Research Scientist JSC SSC RIAR, «New Generation of Control Rods for a Fast Neutrons Nuclear Reactors»

12:40-13:00	Yuriy Khomyakov, Head of Division of Research and Development Chief Scientific Officer, Innovative Technological Center of the «Proryv» Project «R&D Program on CNFC with Use of BN-800»
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Program of Section № 3
«Technology of fuel fabrication and SNF reprocessing»

Tasks:

- 1) Presentation of technologies for processing of SNF by organizations-members of «Proryv» Project;
- 2) Presentation of technologies of fuel fabrication and processing of SNF for use in «Proryv» Project;
- 3) Discussion of information exchange Protocol between Scientific and Engineering Centre for Nuclear and Radiation Safety and Proryv Project on close technological processes/solutions.

Moderators:

Mikhail Skupov, Head of the Responsibility center of the united project «Design of the nuclear fuel element (NFE), the nuclear fuel assembly (NFA) with Mixed Nitride Uranium-Plutonium fuel (MNUP-fuel) and technologies with equipment for production»;

A. Chaban, Chief Specialist, Department of Management of Federal Programs and Innovative Development of the Innovation Management Unit, ROSATOM

Andrey Shadrin, Scientific Coordinator - Chief Technology Officer of the united project «Design of basic technologies for processing spent nuclear fuel (SNF) and radioactive waste management».

09:00-09:20	Mikhail Skupov, Head of the Responsibility center of the united project «Design of the nuclear fuel element (NFE), the nuclear fuel assembly (NFA) with Mixed Nitride Uranium-Plutonium fuel (MNUP-fuel) and technologies with equipment for production» «Dense Fuel and a MNUP Selection»
09:20-09:40	Petr Gavrilov, CEO, Mining and Chemical Combine (GKhK) «MOX-fuel Fabrication at Mining and Chemical Combine (GKhK)»
09.40-10.00	Mikhail Skupov, Head of the Responsibility center of the united project «Design of the nuclear fuel element (NFE), the nuclear fuel assembly (NFA) with Mixed Nitride Uranium-Plutonium fuel (MNUP-fuel) and technologies with equipment for production» «MNUP Fuel fabrication and Refabrication Technology with the Prospect of MA Involvement in the Fuel Cycle»
10:00-10:20	P. Kozlov, Director of Sciences of « Structural Materials» Project, Proryv Project « Structural Materials for Fast Neutron Reactors with Sodium and Lead Coolant»
10:20-10:40	Konstantin Ivanov, Head of the Project Office «SNF Management System Formation», ROSATOM «NFC Remix: options, time frames and technical and economic

	assessment of the effectiveness»
10:40	Coffee break
11:20-11:40	Yu. Zaykov, Director of Sciences of the Project «SNF Reprocessing Pyrochemical Technologies Development at Reprocessing Module of PDEC» «R&D on Development of Pyrochemical Processing Technology of MNUP fuel»
11.40-12.00	Andrey Shadrin, Scientific Coordinator - Chief Technology Officer of the united project «Design of basic technologies for processing spent nuclear fuel (SNF) and radioactive waste management» «Technologies of hydrometallurgical and combined processing of MNUP and MOX SNF FR»
12:00-12:20	A. Gavrikov, Deputy Director, Joint Institute for High Temperatures of the Russian Academy of Sciences «Engineering and physical fundamentals of plasma processing technology of MNUP and MOX SNF FR»
12:20-12:40	Vladimir Kashheev, Scientific Leader of the Radioactive Waste Management Project «Highly Radioactive Waste Management from MNUP SNF. Scope optimization»
12.40-13.00	Olga V. Shmidt, Head of Research&Development Group and Modeling of Technological Process, Innovative Technological Center of the «Proryv» Project «Technological Codes for CNFC»