

LMU RAFU Training for Specialists from Niger Has Completed and a Memorandum on Technological Partnership with NSTU NETI Has Been Signed

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At Novosibirsk State Technical University NETI, the training program for specialists from the oil, gas and energy sectors of the Republic of Niger has completed. Over the course of a week, a delegation of 10 representatives of oil and energy companies and relevant ministries got acquainted with the university's developments.



The participants visited a series of technology demonstrations, including those potentially effective for the development of the energy sector of the Republic of Niger. Researchers and engineers of NSTU NETI presented «Energy Systems of Developing Economies: Challenges and Breakthrough Solutions», «Intelligent Microgrids (MiniGrid) for Energy Independence of Remote Fields», «Energy Storage Systems: A Buffer for Peak Loads of Oil Production», «Analysis of Technological Data and Equipment Diagnostics: Digital Methods for Assessing the State of Energy Assets», «Network Technologies and IoT: Integration of Objects from Sensor to Dispatch Center», «Group Regulation of HPP Power (GRARM): Experience of Optimization and Loss Reduction», «Overvoltage Protection: Frequency-Dependent Devices for Harsh Climatic Conditions», «Multi-Energy Minigrid Taking into Account the Specifics of the Republic of Niger», «Application of Solar Tiles for Hot Water Supply and Heating Using Solar Energy: Solutions for Remote Oil Fields and Shift Camps», as well as «Digital Twins of Electric Power Systems» (SimulMiniGRID program).





Particular interest was aroused by the project of the immersive laboratory «Virtual Twins of HPPs and Substations»: with the help of VR helmets, the participants took a virtual tour of the Novosibirsk HPP and a digital substation. In the Youth Laboratory of Automation, the guests were shown live control

panels and RAPTOR modules — smart controllers that balance the load between the sun, diesel and energy storage in real time. The delegation also got acquainted with the operation of NORMEL voltage normalizers at a real facility in the Novosibirsk region — as part of an off-site industrial tourism tour.



Anastasia Rusina, presenting the university's capabilities within the framework of the strategic session «Collaboration of Universities and Enterprises in the Field of Energy for Achieving Technological Development», presented the flagship management program «Energy 5.0: Technologization and Digitalization of the Industry» as a key tool for forming a personnel reserve and technological leaders of ministries and energy companies of Niger: *«It is built not on the transfer of theoretical knowledge, but on solving real production tasks of the enterprise. Participants, over the course of 8 months, develop roadmaps for the digital and technological transformation of their departments. In essence, this is a working document that is implemented at the enterprise upon completion of training».*

For the effective integration of advanced equipment and its maintenance, NSTU NETI is ready to act as an engineering partner working on the model «Transfer of Innovations + Personnel Training», emphasized Anastasia Rusina: *«We are also ready to create a joint working group that will prepare within three months a detailed roadmap for the implementation of our technologies (NORMEL, RAPTOR, predictive analytics) at pilot facilities in Niger».*









Upon completion of the program, an extended final session «Roadmap for Technological Partnership» was held, during which the participants discussed the prospects for implementing the presented technologies at facilities in Niger. NSTU NETI and the delegation of the Republic of Niger signed a memorandum of intent, consolidating cooperation in the field of technological partnership, and each participant was awarded a certificate of technological partner of NSTU NETI.





Specialists from the Republic of Niger thanked NSTU NETI for the warm welcome and the opportunity to learn about innovative developments. *«On behalf of the entire delegation of the Republic of Niger, we express our deep gratitude for the incredibly warm Siberian welcome and the unique opportunity*

to immerse ourselves in advanced energy technologies and get to know them better. The lectures and master classes became for us a real source of inspiration for the modernization of the energy sector of our country. We will take with us not only invaluable engineering knowledge, but also the brightest memories of the hospitality of Novosibirsk, its cultural wealth and the heartfelt generosity of the host side», — emphasized Technical Advisor to the Minister of Energy of the Republic Marou Garba.