

Polytechnics won the youth competition at Russian Energy Week



The Supernova team of Peter the Great St. Petersburg Polytechnic University became the winner in the interactive sessions on creating youth projects for fuel and energy complex development: #ENERGYLAB in the Technical Projects category.

Nikolay Shulginov, Minister of Energy of Russia, awarded Victoria Verbnikova, the team's captain, with a diploma. Project sessions were held during the Youth Day of the International Forum "Russian Energy Week" that took place in Moscow on October 13-15, 2021. The forum was organized by the Roscongress Foundation, the Ministry of Energy of the Russian Federation and the Moscow City Government.

Polytechnics took part in the competition of youth teams for creating projects of development and popularization of fuel and energy complex of the Russian Federation. Based on the results of the defense of the project Supernova "Creating Production Floating Complexes for Developing Offshore Fields" diploma for first place was awarded to the team captain Victoria VERBNIKOVA by Russian Minister of Energy Nikolay SHULGINOV.

Victoria explained why the development is relevant: according to current gas and oil production forecasts, in the nearest 10-15 years it will be necessary to develop offshore fields. This is a complex task, requiring a special approach to each field. Ice conditions don't

allow to use standard solutions with stationary platforms, that's why our team suggested using FPSO ships (Floating Production, Storage and Offloading - oil-field vessel used in offshore oil production - Author's note) with compressor unit which allows to develop new offshore fields. We suggested using floating nuclear power plants, the latest development of Rosatom, to supply such a complex with electric power, since the capacity of such units covers all the needs of the production complex and allows avoiding the ice threat.

The fact that the Supernova team consists of students from different Polytechnic institutes helped to create such a comprehensive and well-rounded project. For example, Victoria VERBNIKOVA, Egor SHCHENIKOV and Vladislav KRASNIKOV are fourth-year undergraduate students of the Higher School of High Voltage Energy at the Institute of Energy (electrical engineering and electrical engineering field). Ivan DEGTYAREV - in the same year, but in the second year of his master's degree. Fourth-year student Roman KIRIEV and fifth-year student Gleb ZHIGULSKY are studying "Nuclear Reactors and Materials" at the Higher School of Nuclear and Heat Power Engineering of the Institute of Energy. Mikhail BUDO and Vadim GOLUBEV represent PhysMech, a second-year master's student at the Graduate School of Theoretical Mechanics ("Mechanics and Mathematical Modeling"). Daria VOHNESENSKAYA and Ilya LOPYREV are studying "Science-intensive Technologies and the Economics of Innovation" in the 2nd year of their master's degree at the Graduate School of Engineering and Economics, Institute of Industrial Management, Economics and Trade. Daniel ESMAN is studying in the 3rd year of the Higher School of Physics and Material Technologies of the Institute of Mechanical Engineering, Materials and Transport, in the field of "Nanotechnology and microsystems engineering".

The scientific advisor of the team is associate professor Olga NOVIKOVA.

After the defense, the team communicated with representatives of Gazprom Group, who expressed interest in the calculations performed and, quite possibly, some of the proposed solutions will be used in the development of the Shtokman gas condensate field.

In addition, the SPbPU Propositum Inclinator Progressio team led by Victoria Verbnikova took second place in the Youth Global Energy Forecast 2021, presenting to the Russian Ministry of Energy and leading industry specialists a consolidated global youth forecast of the FEC development until 2035.