

## International Competition of Student Scientific Works “Black Sea Science 2025”

### 2<sup>nd</sup> stage results for the field of “Power Engineering and Energy Efficiency”

Place	Country	Institution	Work Title	Authors	Supervisors	Score		
						Stage 1	Stage 2	Total
I	Ukraine	Kherson Educational-Scientific Institute of Admiral Makarov National University of Shipbuilding	Investigation of Design Parameters of the Thermopressor Flow Part for Air Cooling Systems	Meshenko Oleksandr	Kobalava Halina	98	30	128
I	Ukraine	Kherson Educational-Scientific Institute of Admiral Makarov National University of Shipbuilding	Assessment of the Efficiency of Using an Alternative Steam Generator Heat Pump Unit on a Ship	Korneeva Evgenia	Kalinichenko Ivan	96	30	126
II	Ukraine	State Biotechnological University	Increasing the Efficiency of the Fuel and Energy Complex of Ukraine Using Bioenergy Plants	Sologub-Yosef Rafael Rodik Yaroslav	Dudnikov Serhii	92	30	122
II	Ukraine	Sumy State University, PJSC “Sumyoblenegro”	Optimizing the Operating Modes of Transformers in Electrical Networks with Distributed Generation	Koshlatyi Eduard	Diahovchenko Illia Chuprun Anastasiia	94	28	122
II	Ukraine	Vinnitsia National Technical University	Improving the Energy Efficiency of the Enterprise Using Reactive Power Compensation	Dmytryk Serhii Halushko Ivan	Babenko Oleksii	91	28	119
III	Ukraine	Mykolaiv National Agrarian University	Development of Optimal Geometric Parameters of a Rod Electromagnetic System for Power Electrical Equipment	Tumakov Maksym Fuchenko Serhii	Stavynskyi Andrii	90	27	117

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III	Ukraine	State Biotechnology University	Autonomous Cooling System Based on Cold Accumulators and Photoconverters	Yermolenko Oleksandra	Tsurkan Mykola Smilyk Maksym	97	11	108
III	Ukraine	Kherson State Agrarian and Economic University	Smart Charging System for Batteries in Energy Systems with Alternative Energy Sources	Almashov Daniil Garkusha Vitaliy	Zubenko Valentyna	89	18	107
III	Ukraine	National Academy of the National Guard of Ukraine	Development of a Project for a Mobile Autonomous Solar Power Plant for Operation by Military Units in Field Conditions	Doniy Vladyslav	Novykova Olena	88	16	104
III	Ukraine	National Technical University of Ukraine “Igor Sikorsky Kyiv Polytechnic Institute”	Heating and Energy Supply for a Residential Building Based on a Solar System Calculation of the Hot Water Supply System of a Building Using Solar Collectors for the City of Odesa	Hranishevskaya Anzhela Sapon Vladyslav	Sheleshei Tetiana	90	14	104
	Ukraine	Mykolaiv National Agrarian University	Calculation of Optimal Parameters of Electrical Equipment for an Irrigation System	Holubiev Volodymyr Sereda Vitalii	Sadovyi Oleksii	87		
	Ukraine	Vinnitsia National Agrarian University	Perspectives of Biomethane Production as a Way to Ensure Energy Security in Ukraine	Panasiuk Liza Budza Serhiy	Okhota Yuliia	87		
	Ukraine	Sumy State University	Simulation of Operating Modes of the 110/6 kV “Brody” Transformer Substation	Volkogon Eduard Dmitriev Mykyta	Vasileha Petro Lebedka Serhiy	87		
	Ukraine	National Technical University of Ukraine “Igor Sikorsky Kyiv Polytechnic Institute”	Improving the Environmental Efficiency of Energy Equipment at Thermal Power Plants: Analysis of Technologies and Calculation of Harmful Emission Indicators	Usov Ivan Mentii Mykhailo	Sheleshei Tetiana Bednarska Inna	86		

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	Ukraine	Mykolaiv National Agrarian University	Creation of an Energy-Efficient Installation for Electrohydropulse Treatment in Livestock Technological Processes	Petrov Artem Yanosh Oleksandr	Vakhonina Larysa	86		
	Ukraine	Sumy State University	Digital Measurement Device for Monitoring the Main Characteristics of the Power Grid	Reva Vladyslava	Petrovskyi Mykhailo Nesterenko Bohdan	85		
	Ukraine	Kharkiv National Automobile and Highway University	Unification of the Magnetic System of Traction Motors for Electric Vehicles	Kadnai Mikhailo	Nechaus Andrii	85		
	Ukraine	Odesa National University of Technology	Study of the Prospects of Using Artificial Cold at Compressor Stations of Main Gas Pipes to Reduce Operating Costs of Natural Gas	Feloniuk Serhii	Doroshenko Volodimir	85		
	Ukraine	Odesa National University of Technology	Prospective Designs of Atmospheric Water Extraction Systems Using Solar Energy	Bilyi Oleksii	Nikitin Dmytro	85		
	Ukraine	Vinnitsia National Agrarian University	Development of Methods for Calculating Inductances of Higher Harmonic Filters Based on Their Design Parameters	Hryhorenko Olexandr	Hraniak Valerii	84		
	Ukraine	Odesa National University of Technology	Enhancement of Energy Efficiency in Air Conditioning Systems through the Use of Heat Recovery Units of Various Types	Yefremov Ihor	Zhykharieva Nataliia	80		
	Ukraine	National University «Yuri Kondratyuk Poltava Polytechnic»	Automated Continuous-Discrete Sun Tracking System for Autonomous Photovoltaic Plants	Bryzhak Kostiantyn Poltser Stanislav	Kyslytsia Svitlana	79		
	Ukraine	Odesa National University of Technology	Improving the Efficiency of a Compressor Station by Utilizing the Heat from the Exhaust Gases of Gas Turbine Engines	Sahala Violeta	Kolohryvov Mykhailo	78		
	Ukraine	Odesa National University of Technology	Challenges and Strategies for Enhancing Oil Production in Ukraine's Late-Stage Oil Field Development	Doroshenko Volodymyr	Vasyliv Oleg	78		

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	Ukraine	Sumy State University	Implementation of Net Metering and Net Billing as a Pathway for Stimulating Renewable Energy Development in Post-war Ukraine	Hasich Nikita	Zahorodnia Tetiana	76		
	Ukraine	National University "Zaporizhzhia Polytechnic"	Energy Saving as a Way of Achieving Energy Independence	Tomachenko Daria	Bratkovska Kateryna	76		
	Ukraine	Vinnytsia National Technical University	Integration of Modular Small Reactors into the Energy System of Ukraine Challenges and Prospects in the Conditions of War and Post-War Reconstruction	Slidenko Mykola	Malohulko Yulia	75		
	Ukraine	National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute"	Advantages of Introducing Gas Turbine Plants in the Energy Sector of Ukraine in a Situation of Loss of Most Peak and Semi-peak Generating Capacities. Environmental Indicators	Yatsenko Stanislav Teslenko Maksym	Sheleshei Tetiana Bednarska Inna	74		
	Ukraine	Odesa National University of Technology	Development and Research of Systems for Obtaining Water from Atmospheric Air Using Traditional and Renewable Energy Sources	Hodyk Kostyantyn	Volgusheva Natalya	73		
	Ukraine	Odesa National University of Technology	Absorption Water-Ammonia Thermotransformers in Small Power Systems	Erokhin Maxim	Georgiesh Kateryna	71		
	Ukraine	Odesa National University of Technology	Optimization of Air Conditioning Systems Using Dehumidifiers	Vysotenko Denys	Zhykharieva Nataliia	69		
	Kazakhstan	Almaty Technological University	Improving the Efficiency of Immersion Cooling Systems	Khakimov Shukhrat	Tsoi Alexander	69		
	Bulgaria	South-West University "Neofit Rilski"	Thermal Imaging Inspection of Solar Water Heating Systems	Karaganov Antonio	Batalov Filip	67		
	Ukraine	Odesa National University of Technology	Water Harvesting Methods and Technologies	Kravchenko Volodymyr	Nikitin Dmytro	61		
	Ukraine	Odesa National University of Technology	Energy analysis of the prospects for the use of artificial cold in main gas pipelines	Lupenko Oleksandr	Georgiesh Kateryna	60		

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	Ukraine	Odesa State Agrarian University	Universal Hydrodynamic Equipment for Biodiesel Fuel Production Based on Esterification of Components	Yurkovsky Mikhail	Uminsky Sergey Dudarev Igor	55		
	Ukraine	Vinnytsia National Technical University	The Minimization of Uneven Generation Impact from Renewable Energy Sources in the Power System Balance	Povstianko Oksana	Malohulko Yulia	55		
	Ukraine	National Technical University of Ukraine “Igor Sikorsky Kyiv Polytechnic Institute”	Design of Heating and Ventilation Systems Using a Small Hydropower Unit	Apostol Yaroslav Olymenko Iryna	Sheleshei Tetiana Bednarska Inna	55		
	Ukraine	Lviv State University of Life Safety	The Impact of Short Circuit on the Fire Safety of Electrical Installations	Dudnyk Valeriia	Kravets Ihor	55		
	Ukraine	National Technical University of Ukraine “Igor Sikorsky Kyiv Polytechnic Institute”	Perspectives on the Use of Marine Energy Installations	Syvachenko Victoria Ostrovskyi Anton	Sheleshei Tetiana Bednarska Inna	55		