

V INTERNATIONAL MUNICIPAL BRICS+ FORUM FUTURE ENERGY: ALTERNATIVE SOURCES FOR SUSTAINABLE DEVELOPMENT

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Conference report by *Anastasiya Oshchepkova*



Participants of the session “Future Energy: Alternative Sources for Sustainable Development” at the V International Municipal BRICS+ Forum in Saint Petersburg (November, 2023)

Abstract:

On November 9th, 2023, the ENERPO Research Center at the European University at Saint Petersburg co-organised a session on the sidelines of the V International Municipal BRICS+ Forum in Saint Petersburg. This annual business forum, which is held with the support of the Ministry of Foreign Affairs of the Russian Federation, Federal Agency “Rossotrudnichestvo” and the Government of Saint Petersburg, is aimed at promoting the integration of positive international experience, the development of social and economic municipal territories of emerging countries and strengthening relations between the BRICS countries and other states.

Keywords: ENERPO Research Center, future energy, International Municipal BRICS+ Forum, sustainable development

V Международный Муниципальный форум БРИКС+. Энергия будущего: Альтернативные источники для устойчивого развития

Аннотация: 9 ноября 2023 года Исследовательский центр ЭНЕРПО Европейского университета в Санкт-Петербурге выступил организатором сессии в рамках V Международного Муниципального форума БРИКС+ в Санкт-Петербурге. Целью этого ежегодного делового форума, который проводится при поддержке Министерства иностранных дел Российской Федерации, Федерального агентства «Росотрудничество» и Правительства Санкт-Петербурга, является содействие интеграции положительного международного опыта,

развитие социального и экономического благосостояния муниципальных территорий развивающихся стран и укрепление отношений между странами БРИКС и другими государствами.

Ключевые слова: ИЦ ЭНЕРПО, Международный Муниципальный форум БРИКС+, устойчивое развитие, энергия будущего

In 2023, the forum gathered 7000 representatives of state, business and non-commercial organisations, as well as from the scientific community from 56 countries. The ENERPO Research Center had the honor to organise the **“Future Energy: Alternative Sources for Sustainable Development”** session and invited experts from the business and academic community to discuss current trends and perspectives of renewable energy against the backdrop of the changing environmental situation in the world.

Maxim Titov, Head of Energy and Infrastructure at the Eurasian Fund for Stabilisation and Development, who was a moderator of the session, opened the discussion by stating the most topical questions: What are the prospects for alternative energy at the moment? What obstacles might slow down the development of this industry? How to accelerate a transition to “green” energy?



Maxim Titov, Alexey Zhikharev and Grigory Nazarov

Alexey Zhikharev, CEO of the Association for the Development of Renewable Energy, shared his views on the current status and perspectives of renewable energy generation in Russia. Talking about the government program for the support of renewable energy producers in the wholesale capacity market, the speaker highlighted that about 4.3 GW of renewables-based power generation capacity out of the planned 5.4 GW has already been realised in the form of projects. Today, renewable energy facilities function in more than 50 regions of the Russian Federation. By 2035, renewable energy capacity in Russia will increase by 10 GW.

Grigory Nazarov, CEO of NovaVind JSC (Rosatom’s wind power division), shed light on the current situation and future vision for wind energy generation at Rosatom. Among the advantages of renewable over traditional energy, the speaker mentioned a short construction cycle, easy automation and operation without direct human intervention, knowled-

ge intensity and the ability to meet the growing electricity demand and lead to the efficient development of territories. Speaking of wind-power engineering development at Rosatom, Mr Nazarov talked about the NovaVind pilot project for the construction of a wind farm in the isolated energy system of Sakhalin Island, within the framework of which the necessary research is currently being carried out. It is expected that the investment decision on the project will be made in 2024.

The discussion then turned to the use of hydrogen as an energy resource, and **Konstantin Romanov**, CEO of Gazprom Hydrogen LLC, shared his views on whether there is a place for hydrogen in the future of energy. As such, even though Gazprom Hydrogen LLC is focused on the development of innovative technologies for low-carbon production of hydrogen from natural gas, today, hydrogen is used little as an energy resource due to its high cost. According to the speaker, given the challenges associated with the use of hydrogen, natural gas remains the real energy resource of the future.



Konstantin Romanov and Branko Milicevic

The discussion on hydrogen was continued by **Branko Milicevic**, Sustainable Energy Division, United Nations Economic Commission for Europe, who raised a question about whether hydrogen can become a part of the future energy system. According to the speaker, we still do not know the answer to this question as the cost of hydrogen in Europe remains high: €12/kg or more, although it may go down to €5–8/kg by 2030. Despite unprecedented political support for low-emission hydrogen in the UNECE Region, only 4% of hydrogen projects get financed, according to IEA. As such, the UNECE Hydrogen Task Force is trying to explore whether there is a business case for low-emission hydrogen. Overall, blending natural gas and hydrogen may accelerate deployment.

Alexey Kobzev, Independent Expert on Energy Transition in Central Asia, Project Manager for Renewable Energy and Climate Change, touched upon energy transition in Central Asia with examples from Uzbekistan and Kazakhstan. Talking about Uzbekistan, the speaker mentioned the approval of the “Concept of providing the Republic of Uzbekistan with electrical energy for 2020–2030” by the Government of Uzbekistan. As such, Uzbekistan pledges to ensure carbon-neutral power generation by 2050 and to reduce CO₂ emissions per unit of GDP by 35% (2010) by 2030. According to the expert, the electricity generation sector is the backbone of Uzbekistan’s economy and is responsible for a significant share of the country’s greenhouse gas emissions. Thus, decarbonisation of electricity production will play a critical role in achieving Uzbekistan’s climate goals. As for Kazakhstan, the country is among the top 30 in greenhouse gas emissions and has accepted ambitious international commitments, namely: to increase the amount of energy generated from renewable energy sources by 5 times from 3% to 15% by 2030 and to reduce the share of energy generated from coal from 70% to 40%. According to the speaker, private initiatives will be the main source of financing for achieving carbon neutrality goals.

Michael Oshchepkov, Researcher at RC ENERPO, European University at St. Petersburg, presented a book “Russian Coal in the Era of Climate Change” written by a team of ENERPO experts including Nikita Lomagin, Irina Mironova, Maxim Titov and Michael Oshchepkov. The book examines the Russian coal industry in different contexts: historical, modern and in the context of active promotion of the global climate agenda and energy transition processes, which are also relevant for Russia. The speaker shed light on the key findings of the book and outlined challenges and prospects for the Russian coal industry in the era of climate change. Among the challenges, three factors were mentioned, such as transport (railway to the East), excess natural gas volumes and internal competition, as well as pricing conditions. The speaker also touched upon new opportunities for the coal industry in times of renewable energy.



Alexey Kobzev and Michael Oshchepkov

Olga Teplova, Head of the Sustainable Development Department, Researcher at RC ENERPO, European University at St. Petersburg, spoke about innovative activities and patent portfolios of the BRICS countries in the context of energy transition. The speaker shared the results of the study conducted by RC ENERPO and ARS-Patent, the purpose of which was to understand what technological solutions will be used to implement the energy transition and what approaches are applied to assess the technological risks of this transition. The study showed that European countries rank first in the world in patent families for low-carbon technologies in the energy sector with a share of 28%, followed by Japan at 25% and the USA at 20%. China accounts for 8% of all patent families. In these countries, the number of patents related to renewable energy technologies has been declining since 2012, which reflects a certain market maturity for some of these technologies, including solar PV systems. A similar trend is observed in the BRICS countries. RES technologies that were patented before 2012 are, for the most part, already at the commercialisation stage and are being used to implement energy projects. The maturity of the PV technology market has allowed half of the Paris Agreement countries (49%) to include it in their Nationally Determined Contributions by 2030 as a mitigation solution costing less than US\$20 per tonne of CO₂e.



Olga Teplova and Ekaterina Grushevenko

Ekaterina Grushevenko, Expert of the Center for Energy Transition and ESG, Skolkovo Institute of Science and Technology, addressed CCUS technologies and stated that in the European Green Deal, CCUS is designated as a breakthrough technology without which the EU will not be able to reduce CO₂ emissions by 55% relative to 1990 by 2030. The application potential of CCUS is very wide, so the technology



Speakers and guests of the session “Future Energy: Alternative Sources for Sustainable Development” at the V International Municipal BRICS+ Forum in Saint Petersburg (November, 2023)

may be of interest to both the oil industry and end product producers. Additionally, the speaker mentioned that there are few estimates of CCUS demand in the world, and they differ from one another. However, projections indicate that over the next 30–50 years a new large-scale carbon capture, transport, utilisation and storage industry will need to be created, and its volume is minimally estimated at an average of 4–5 Gt by 2050.

About Anastasiya Oshchepkova

Anastasiya Oshchepkova is the Editor-in-Chief at the ENERPO Journal. She holds her Master’s in International Relations from Saint Petersburg State University. Currently Anastasiya is a PHD candidate at SPbU’s School of International Relations, focusing on energy cooperation between Russia and France.

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