BUSINESS PROGRAMME OF THE RUSSIAN ENERGY WEEK INTERNATIONAL FORUM

13–15 October 2021, Moscow

Programme accurate as of October 13, 2021

October 13, 2021

09:00–10:15

Manege, –2nd floor conference hall A

The Climate Agenda

The Russian Fuel and Energy Sector in a Time of Transition

The international climate agenda is compelling many countries to reform their carbon-based energy systems. For Russia, which holds a leading position in global hydrocarbon markets, the transition to development to low greenhouse gas emissions presents a serious challenge, but it also opens up new opportunities for economic growth based on renewable energy, hydrogen technologies, advanced processing of raw materials and the implementation of green projects. In the new reality, a number of major companies in the Russian fuel and energy sector have already begun to implement projects aimed at transitioning, viewing them not only as a contribution to global sustainable development, but also as way to improve their image and increase levels of trust amongst partners. At the same time, reducing the carbon component of the fuel and energy sector requires large-scale investment. How will the energy transition affect the development of the Russian fuel and energy sector? Have industry players shown a willingness to invest in the future utilizing the green financing market mechanisms? Can the government help create incentives to expand ESG business practices?

Moderator:

- **Elena Lazko**, Partner, Head of Strategy and Operations, KPMG CIS

Panellists:

- **Roman Berdnikov**, First Deputy General Director, Member of the Management Board, RusHydro
- **Sergey Kudryashov**, Director General, Zarubezhneft
- **Tore Morten Loeseth**, Senior Vice President for Exploration and Production International, Country Manager for Russia, Equinor **(online)**
- **Pavel Sorokin**, Deputy Minister of Energy of the Russian Federation
- **Mikhail Sukhov**, General Director, Analytical Credit Rating Agency
- **Tatiana Zavyalova**, Senior Vice President for ESG (Environmental, Social, and Corporate Governance), Sberbank

Front row participants:

- **Sergey Donskoy**, Member of the Board of Directors, Irkutsk Oil Company (INK)
- **Valery Seleznev**, First Deputy Chairman of the Committee on Energy of the State Duma of the Federal Assembly of the Russian Federation

09:00–10:15

Manege, –2nd floor conference hall B

The Climate Agenda

The Impact of Europe’s Green Pivot on Russian-European Cooperation in Energy

Europe’s green shift doesn’t just mark a new direction in EU climate policy, but also a radically different economic approach that will have far-reaching consequences for its key trade and economic partners, including Russia. The EU's target of achieving carbon neutrality by 2050 means a revision to the paradigm of cooperation between Russia and Europe, including in the energy sector, which was based on Russia’s significant role in ensuring the energy security of the European Union and the significant contribution of European investors to the development of the Russian fuel and energy sector. Russia ranks fourth globally in terms of carbon dioxide emissions, but has enormous potential to develop carbon-neutral energy sources as well as ecosystems with significant absorptive capacity. In view of this, the country has something to offer international partners both in terms of combined efforts to combat climate change and the development of new segments of industry. The creation of favourable conditions for investment and innovation, the search for new areas of technological cooperation and the alignment of national carbon regulation systems all appear far preferable to restrictive measures, and will bring benefits to all parties. Joint efforts can on the one hand help to reduce the carbon footprint of European companies in Russia, and on the other hand could bring Russia closer to the transition to a greener economy in line with global trends. What is the development trajectory of the energy transition in Russia and Europe to 2030? How can high levels of energy security be ensured when a departure from the hydrocarbon economy is already inevitable? What challenges and risks does the Russian energy sector face as a result of current energy policy? What financial resources are available to businesses hoping to

implement decarbonization projects? What successful examples of energy companies adapting to the new market conditions can offer a positive signal for other industry players? What effect will the global energy transformation have on the labour market? What is the role of universities in training specialists for the new professions that will be required in order to implement the energy transition?

Moderator:

- **Ernesto Ferlenghi**, Chairman of the Energy Committee, Chairman of the Steering Committee of the Green Initiative Project, Association of European Businesses (AEB)

Panellists:

- **Markus Ederer**, Ambassador of the European Union to the Russian Federation **(online)**
- **Ferenc Horvath**, Special Envoy to the Chairman, MOL Group **(online)**
- **Alexey Kulapin**, General Director, Russian Energy Agency (REA) of the Ministry of Energy of Russia
- **Ivan Lobanov**, Rector, Plekhanov Russian University of Economics
- **Fawad Quraishi**, Vice President for Safety, Labor Protection, Industrial Safety, Environmental Protection and Sustainable Development, Equinor
- **Giuseppe Ricci**, Chief Operating Officer Energy Evolution, Eni **(online)**
- **Sergey Tverdokhleb**, Deputy General Director for Special Projects and External Relations, MCC EuroChem

Front row participants:

- **Konstantin Dolgov**, Deputy Chairman of the Committee on Economic Policy of the Federation Council of the Federal Assembly of the Russian Federation
- **Alexey Knizhnikov**, Head of the Responsible Industry Programme, World Wide Fund for Nature (WWF) Russia **(online)**
- **Aleksey Matveev**, Deputy Chairman of the Board, Gazprombank

09:00–10:15

Manege, –2nd floor conference hall C

Upcoming Technology Solutions

A Hydrogen-Driven Future for Russia and the World: Dialogue with Business

In partnership with Metalloinvest

Many traditional global energy players are now competing in a hydrogen race. According to forecasts from the Russian Energy Agency of the Ministry of Energy of the Russian Federation, additional global demand for hydrogen may reach 40–170 million tons per year by 2050, signaling the creation of a promising new market. Over 30 countries including Russia have developed their own hydrogen strategies in order to secure their positions. In the case of Russia, the government has set its sights on realizing the country's potential in the production, export and use of hydrogen as well as establishing Russia as a global leader in its production and exports. Potential hydrogen export volumes from Russia could reach 200,000 tonnes by 2024, 2 million to 12 million tonnes by 2035 and 15 million to 50 million tonnes by 2050. The cornerstone of the new industry is technology, which is only just beginning to be actively developed. What technologies does hydrogen energy require to be produced efficiently, and when will Russian products enter the global market? What projects are already being implemented in the country, and how could this act as a springboard to help build new export markets in a short space of time? What are the opportunities for international cooperation in hydrogen energy, especially in technology transfer, joint ventures and infrastructure projects?

Moderator:

- **Oleg Zhdaneev**, Deputy General Director - Head of Import Substitution in Oil and Energy Complex Competence Center, Russian Energy Agency of the Ministry of Energy of the Russian Federation

Panellists:

- **Abderrezak Benyoucef**, Head of Energy Studies Department, Organization of the Petroleum Exporting Countries
- **Yury Gavrilov**, Strategy and M&A Director, METALLOINVEST LLC
- **Alisher Kalanov**, Head of the Investment Division, RUSNANO
- **Anton Maximov**, Director, Institute of Petrochemical Synthesis. A.V. Topchieva of the Russian Academy of Sciences
- **Anton Moskvin**, Vice President for Marketing and Business Development, Rusatom Overseas **(online)**

Front row participants:

- **Kentaro Hosomi**, Executive Vice President & Chief Regional Officer EMEA, Mitsubishi Heavy Industries, Ltd
- **Dmitry Kholkin**, Director, Infrastructure Center Energinet, North-West Strategic Research Center Foundation; Deputy Head of the Working Group, EnergyNet NTI **(online)**

- **Vladimir Rogov**, Managing Director, Partner, BCG

09:00–10:15

Manege, –2nd floor conference hall D

Upcoming Technology Solutions

The Fuel Revolution in the Transport Sector: A Focus on the Environment

The transport sector is one of the key contributors to the greenhouse gases emissions, driving the search for environmentally acceptable solutions to ensuring mobility of the society. The main “revolution” underway is in the electric transportation, yet the nascent stage of the charging infrastructure in Russia is cooling the internal demand for electric vehicles. Russia recently launched a state programme for the development of electric transport, including new measures to boost demand, support the production of vehicles and develop related infrastructure. Another support programme promotes the use of natural gas, including LNG, as a motor fuel. This programme is also focusing on the development of refuelling infrastructure and has received widespread support from oil and gas industry. The final, less developed alternative is hydrogen, where global and Russian manufacturers are collaborating to engineer hydrogen fuelled cars, and the government is considering a federal project entitled ‘The Electric Car and the Hydrogen Car’. How can an effective implementation of the government programmes be ensured and how can the profitability of infrastructure investment be achieved for all market participants? What are the key difficulties encountered by the megacities and regions, and how can they be dealt with? How can the adoption of environmentally friendly transport for both public and corporate needs be accelerated?

Moderator:

- **Denis Deryushkin**, Deputy General Director - Head of Analytical Center, Russian Energy Agency of the Ministry of Energy of the Russian Federation

Panellists:

- **Ayed Al-Qahtani**, Director, Research Division, Organization of the Petroleum Exporting Countries (OPEC)
- **Dmitriy Belyaev**, General Director, Hydroinvest; Director of Strategic Transactions Department, RusHydro
- **Beatrice Buffon**, Group Senior Executive Vice-President, International Division, EDF
- **Zoya Kaika**, Deputy Director General, SOLLERS
- **Maksim Kolesnikov**, Director of the Department for Economic Sectors, Ministry of Economic Development of the Russian Federation
- **Konstantin Kravchenko**, Acting Deputy General Director for Digital Transformation, Rosseti
- **Anton Rubtsov**, Director of Oil Refining and Gas Complex Department, Ministry of Energy of the Russian Federation

Front row participant:

- **Daria Kozlova**, Director of Consulting in the Fuel and Energy Complex State Regulation Field, VYGON Consulting

11:00–12:15

Manege, –2nd floor conference hall A

New Scenarios for the Economy and the Market

Oil Production in Russia: A Star or Cash Cow?

Russia’s oil industry is not only a key revenue generator for the federal budget, it also drives social and economic activity in the regions. The taxation system needs to be overhauled to allow for production to remain in places where people live, while ensuring that new areas of activity and new regions are developed. Is it possible to create a long-term taxation system for greenfield and brownfield sites that can withstand at least a decade of changes to macroeconomic and price factors as well as short-term budgetary requirements?

Moderator:

- **Grigory Vygon**, Managing Director, VYGON Consulting

Panellists:

- **Pavel Sorokin**, Deputy Minister of Energy of the Russian Federation
- **Pavel Zavalny**, Chairman of the Committee on Energy of the State Duma of the Federal Assembly of the Russian Federation; President, Russian Gas Society

11:00–12:15

Manege, –2nd floor conference hall B

The Climate Agenda

Net Zero by 2050: New Opportunities for International Cooperation

The climate agenda is set to have a major impact on the German and Russian economies in medium and long term. On the one hand, the EU Green Deal and the prospect of accelerated decarbonisation pose a threat to supply of Russian products with a large carbon footprint to the EU. Meanwhile, the introduction of the new carbon regulations have mixed effect on the German economy as well, as it hugely dependent on the supply of raw materials from third countries. On the other hand, developments in the global climate policy could serve as a powerful impetus for the modernization of various sectors of the Russian economy and create new opportunities for Russian–European cooperation. This session will explore the economic and non-economic effects of the Russian and German carbon policies, as well as the main directions of Russian–German cooperation to address the climate change.

Moderator:

- **Matthias Schepp**, Chairman, Russian-German Chamber of Commerce; Delegate of the Delegation of German Industry and Commerce in the Russian Federation

Panellists:

- **Darya Borisova**, Managing Director for Development and Innovations, SIBUR
- **Andreas Feicht**, State Secretary, Federal Ministry for Economic Affairs and Energy, Federal Republic of Germany **(online)**
- **Kristina Haverkamp**, Managing Director, German Energy Agency (dena)
- **Sergey Machekhin**, Deputy General Director Project Engineering and International Cooperation, RusHydro
- **Alexander Sharabaika**, Member of the Management Board, Deputy General Director for Finance and International Projects, PhosAgro **(online)**
- **Evgeny Shvarts**, Head, Center for Responsible Nature Management of the Institute of Geography of the Russian Academy of Sciences; Doctor of Geographical Sciences, Distinguished Ecologist of the Russian Federation

11:00–12:15

Manege, –2nd floor conference hall C

Upcoming Technology Solutions

The Energy Transition in the Housing Utilities Sector and Government Support of Utilities Infrastructure Modernization Programmes

In partnership with Housing and Public Utilities Reform Support Fund

In an age of a global energy transition, the utility sector is faced with the tasks of saving energy and increasing energy efficiency throughout the country. The depreciation of the majority of utilities infrastructure facilities – water supply, heat supply, and water treatment networks and systems – currently exceeds 60%. The housing utilities sector is third worst offender across all sectors with regard to environmental pollution due to excessive power and heat consumption. A large-scale, systematic to modernize the housing utilities industry is required: one based in modern, energy-efficiency, and safe technologies. This session will discuss strategic modernization targets and the development of power utilities, lessons learned from the use of alternative and renewable energy sources in the housing and utilities complex, prospects for reducing environmental impact and developing carbon-free power in the utilities sector, and conditions for the provision of government support.

Moderator:

- **Sergey Sivaev**, Professor at the Faculty of Urban and Regional Development, National Research University Higher School of Economics

Panellists:

- **Petr Bobylev**, Deputy Minister of Energy of the Russian Federation
- **Irina Bulgakova**, Head of the Housing and Utilities Commission of the Public Council of the Ministry of Construction, Housing and Utilities of the Russian Federation
- **Evgeny Gasho**, Head of the Research Laboratory for Methodological Problems of Energy Saving, National Research University "Moscow Power Engineering Institute"
- **Alexander Lomakin**, First Deputy Minister of Construction, Housing and Communal Services of the Russian Federation **(online)**
- **Ilya Minyaev**, Program Manager "Improving Urban Housing Efficiency and Financing Facilitation for Building Modernization in the Russian Federation", World Bank **(online)**
- **Olga Serdyuk**, Deputy General Director, Housing and Public Utilities Reform Support Fund
- **Vladimir Sidorenko**, Deputy Chairman of the Government of the Sakhalin Region

11:00–12:15

Manege, –2nd floor
conference hall D

Upcoming Technology Solutions

Small Modular Reactors, Energy Supply for Regions and Industry Sector

In partnership with State Atomic Energy Corporation ROSATOM

The world is moving from a traditional energy system to a modern ecosystem, when it is necessary to be flexible, follow the principles of responsible consumption and protect the environment. And the fundamental question is how the energy supply and the base load in the network, incl. in remote and hard-to-reach areas will be achieved. The solution is a balanced energy mix including various types of generation and technological breakthroughs. What role can be assigned to low carbon energy sources, including nuclear power, in addressing the issue of providing stable electricity for various consumers? What prospects do small modular reactors have and what should be done to make them available for sustainable energy supply to regions and industry?

Moderator:

- **Sergey Brilev**, Anchor; President, The Global Energy Association

Panellists:

- **Mikhail Chudakov**, Deputy Director General, Head of the Department of Nuclear Energy, International Atomic Energy Agency (IAEA)
- **Evgeniy Grabchak**, Deputy Minister of Energy of the Russian Federation
- **Alexey Likhachev**, Director General, State Atomic Energy Corporation ROSATOM
- **Aysen Nikolaev**, Head of Sakha Republic (Yakutia) **(online)**
- **Oleg Novachuk**, Chairman of the Board of Directors, Mining company Baimskaya
- **Angela Wilkinson**, Secretary General, Chief Executive Officer, World Energy Council (WEC)

13:00–15:00

Manege, 1st floor
Plenary conference hall

Plenary Session

Address by the President of the Russian Federation Vladimir Putin

Video address:
João Lourenço, President of Angola, which is chairing the OPEC conference in 2021

Moderator:
Hadley Gamble, Anchor, CNBC

Speakers:
Ola Källenius, Chairman of the Board of Management of Daimler AG and Mercedes-Benz AG
Bernard Looney, Chief Executive Officer, BP
Patrick Pouyanne, Chairman, Chief Executive Officer, TotalEnergies
Darren Woods, Chairman, Chief Executive Officer, Exxon Mobil Corporation

16:30–17:45

Manege, 1st floor
Plenary conference hall

New Scenarios for the Economy and the Market

Global Challenges and Opportunities in Electric Power

In 2016 the Paris Agreement on climate change, which aims to provide a framework and objectives for governments around the world to reduce greenhouse gas emissions and thereby contribute to a reduction in average global temperatures, was adopted by 196 parties to the United Nations Framework Convention on Climate Change, including Russia. The world has already set about implementing it in practice, and many countries have declared carbon neutrality goals, which they are working towards by rapidly developing new energy technologies, electric transport and renewable energy. In 2020 alone, around 280 GW of wind and solar power was commissioned globally. By 2030, around 1,000 GW of renewable energy capacity is expected to be commissioned each year. Russia supports global efforts to reduce greenhouse gas emissions, with over 80% of the country's electricity generated from sources with a low greenhouse gas emission factor, including hydroelectric power plants, nuclear power plants, combined-cycle power plants, and combined heat and power generation. The share of solar and wind generation in the country's electricity mix remains very low, though this does mean that there is huge potential for further reducing the Russian electric power industry's carbon intensity. What is the carbon intensity of the Russian electric power industry compared with Europe? How far can the Russian and global renewable energy sector be scaled up in the decades to 2050? What are the capabilities of hydroelectric power plants in contributing to the reduction of greenhouse gas emissions? What are the future prospects for nuclear energy?

Moderator:

- **Alexandra Suvorova**, Anchor, Russia 24 TV Channel

Panellists:

- **Bento Albuquerque**, Minister of Mines and Energy, Federative Republic of Brazil

- **Olga Algayerova**, Executive Secretary, United Nations Economic Commission for Europe (UNECE)
- **Alparslan Bayraktar**, Deputy Minister of Energy and Natural Resources of the Republic of Turkey
- **Kirill Komarov**, First Deputy General Director, Director of the Development and International Business Unit, ROSATOM State Atomic Energy Corporation
- **Andrey Ryumin**, General Director, Chairman of the Management Board, Rosseti
- **Nikolay Shulginov**, Minister of Energy of the Russian Federation

Front row participants:

- **Karim Amin**, Executive Vice President for Generation, Siemens Energy AG
- **Anton Usachev**, Director, Russian Solar Energy Association; PR Director, Hevel Group

16:30–17:45

Manege, –2nd floor conference hall A

New Scenarios for the Economy and the Market

Russia-2060: Perspectives of Green Energy

Today, the fuel and energy sector is facing an ambitious decarbonization task, involving large-scale challenges. Among other things, there is a need for national regulation of greenhouse gas emissions, an increase in renewable energy generation, large-scale electrification and digitalization of transport, the introduction of technology for capturing, storing and processing carbon dioxide. And this is only part of what will need to be done for the energy transition. Is it possible to make certain branches of the fuel and energy complex "green" and what should be done in this regard? What are the barriers and would it be possible to overcome them by 2060? Can the energy transition in Russia towards green energy become the basis for economic growth?

Moderator:

- **Alexander Vedyakhin**, First Deputy Chairman of the Executive Board, Sberbank

Panellists:

- **Roman Berdnikov**, First Deputy General Director, Member of the Management Board, RusHydro
- **Alexandra Panina**, Member of the Management Board, Inter RAO; Chairman of the Supervisory Board, Council of Power Producers **(online)**
- **Alexey Russkih**, Governor of Ulyanovsk Region
- **Pavel Sorokin**, Deputy Minister of Energy of the Russian Federation
- **Angela Wilkinson**, Secretary General, Chief Executive Officer, World Energy Council (WEC)

16:30–17:45

Manege, –2nd floor conference hall B

Upcoming Technology Solutions

Defense Industry and the Fuel and Energy Sector Inter-Enterprise Collaboration for Import Substitution and Technological Development

Ensuring the national technological sovereignty of Russia’s fuel and energy sector is one of the key prerequisites for the country's energy security and economic growth today. In order to support the continued transition of the Russian energy sector to the use of domestic high-tech products, cooperation between industry players and enterprises within the defense industry must be strengthened. Boosting mutually beneficial interaction between the industries will allow the fuel and energy sector to reduce its need for products that are critical for sustainable development, while supporting the defense industry’s efforts to diversify production in the face of reduced state defense procurement orders and build up competencies in civilian sectors. Successful examples of cooperation in this area already exist. Defense industry companies are currently fulfilling existing agreements, sharing sought-after solutions for the exploration and production of hydrocarbons, including hard-to-recover oil reserves. At the same time, there is still huge potential for the development of partnerships involving cross-sector cooperation, as well as new approaches to eliminating financial, human and technological risk. What examples of successful cooperation between the fuel and energy sector and the defense industry can be identified and considered for expansion? What are the future prospects for cooperation, and is there a business model that makes it possible to use the defense industry's competencies in the best possible interests of the fuel and energy sector? What government support measures are needed in order to accelerate diversification?

Moderator:

- **Oleg Zhdaneev**, Deputy General Director - Head of Import Substitution in Oil and Energy Complex Competence Center, Russian Energy Agency of the Ministry of Energy of the Russian Federation

Panellists:

- **Grigory Gladkovsky**, Deputy Chief Engineer, Rosseti

- **Yevgeny Gribov**, Director, Department of Engineering for the Fuel and Energy Industry, Ministry of Industry and Trade of the Russian Federation **(online)**
- **Georgy Kalamanov**, Deputy Director, Development and International Business Unit, Rosatom State Atomic Energy Corporation
- **Igor Moiseev (online)**
- **Vitaly Shevtsov**, Director, Diversification Centre, Roscosmos State Corporation for Space Activities **(online)**
- **Yury Solomonov**, General Designer for the Development of Strategic Missile Systems, Moscow Institute of Heat Engineering Corporation

16:30–17:45

Manege, –2nd floor conference hall C

New Scenarios for the Economy and the Market

Emerging Challenges for the Chemical Industry: The Climate Agenda

In partnership with SIBUR Holding

The chemical industry is a driver of industrial growth and one of the fastest growing global economic sectors, with a growth rate of 1.2 times that of GDP. Polymer production has increased by 50% globally over the last decade. The use of chemical products makes it possible to respond quickly and effectively to global challenges such as the COVID-19 pandemic, thereby contributing to the industry's continued sustainable growth. In recent years, Russian chemical companies have opened up a large number of new production facilities focused primarily on meeting the needs of the domestic market and the import substitution programme for basic chemical products. The projects currently being implemented (Amur Gas Processing Plant, Nizhnekamskneftekhim, Baltic Chemical Complex and Irkutsk Oil Company among others) will make a significant contribution to growth in Russia's non-resource non-energy exports. The realization of the sector's potential is being achieved thanks to the government's effective system of long-term incentives. One of the key challenges facing the global and Russian chemical industries, however, is the climate agenda. Thanks to their unique functional characteristics, chemical products play an important role in efforts to protect the environment by reducing resource consumption and carbon emissions compared with products made from traditional materials. On the other hand, tightening environmental state regulations are forcing chemical companies to increasingly redirect their projects towards sustainable development objectives. What strategies are chemical companies pursuing in order to maintain sustainable growth amidst the growing climate agenda? What new technologies are they focusing on? What state support measures can help to secure the successful implementation of projects in the sector and strengthen the Russian chemical industry's competitiveness on the global market?

Moderator:

- **Denis Deryushkin**, Deputy General Director - Head of Analytical Center, Russian Energy Agency of the Ministry of Energy of the Russian Federation

Panellists:

- **Darya Borisova**, Managing Director for Development and Innovations, SIBUR
- **Yakov Ginzburg**, General Director, Chairman of the Management Board, Irkutsk Oil Company (INK)
- **Anton Maximov**, Director, Institute of Petrochemical Synthesis. A.V. Topchieva of the Russian Academy of Sciences
- **Anton Rubtsov**, Director of Oil Refining and Gas Complex Department, Ministry of Energy of the Russian Federation
- **Maxim Ufaev**, Partner, McKinsey & Company

16:30–17:45

Manege, –2nd floor conference hall D

Upcoming Technology Solutions

Power Engineering: Status of Gas Turbine Production in Russia

The manufacturing of Russian-made high-power gas turbines and the establishment of Russian-based engineering is one of the key milestones of the Russian power engineering industry. This achievement is another step towards ensuring the country's energy sovereignty and will also improve the performance of thermal power plants once high-power gas turbines are introduced into the combined cycle of heat and electric power generation. However, it should be borne in mind that the development and production of high-power turbines is a complex technical challenge that involves not only the turbine itself, but also related areas. Since 2018, with the support of the Russian Ministry of Industry and Trade, a programme has been being implemented to revive the production of medium and large capacity Russian power gas turbines. What is the current status of this major turbine manufacturing project? How is cooperation with institutions and enterprises in the industry being organized? How will the production of high-tech components for the hot section of gas turbines be ensured? What solutions have been applied in key components of gas turbines?

Moderator:

- **Nikolay Rogalev**, Rector, National Research University "Moscow Power Engineering Institute"

Panellists:

- **Evgeniy Grabchak**, Deputy Minister of Energy of the Russian Federation
- **Mikhail Ivanov**, Deputy Minister of Industry and Trade of the Russian Federation
- **Alexander Konyukhov**, Chief Executive Officer, Power Machines
- **Mikhail Lifshitz**, Chairman of the Board of Directors, Rotec
- **Vladimir Mikhailov**, General Director, Polzunov Scientific and Production Association for the Research and Design of Power Equipment

17:45–18:30

Manege, 1st floor
Plenary conference hall

Award Ceremony

The Global Energy Prize Award Ceremony

The Global Energy Prize is an international award for outstanding research and scientific and technological developments contributing to improved efficiency and environmental safety in the use of the Earth's energy sources in the interests of all humanity.

Awards are presented by:

- **Alexander Novak**, Deputy Prime Minister of the Russian Federation

Presenters:

- **Sergey Brilev**, Anchor; President, The Global Energy Association
- **Daria Kozlova**, Anchor, Russia 24 TV Channel

2020 award winners:

- **Nikolaos Hatziargyriou**, Professor, Division of Electric Power, National Technical University of Athens (NTUA)
- **Yang Peidong**, Director, The Kavli Energy NanoScience Institute (ENSI); Professor, University of California, Berkeley
- **Carlo Rubbia**, Senior Professor, Gran Sasso Science Institute; Nobel Prize Laureate in Physics

2021 award winners:

- **Suleiman Allahverdiev**, Head, Laboratory for Guided Photobiosynthesis, K.A. Timiryazev Institute of Plant Physiology of the Russian Academy of Science
- **Yi Cui**, Director, Precourt Institute for Energy, Stanford University
- **Zinfer Ismagilov**, Director, Institute of Coal-chemistry and Material Science of the Siberian Branch of the Russian Academy of Science

October 14, 2021

08:00–09:30

Hotel National,
Moskovsky hall,
Moscow, st. Mokhovaya,
15/1, building 1

The Climate Agenda

Business breakfast

How to Achieve Carbon Neutrality in the Arctic

As part of the Green Energy in the Arctic Conference

The pandemic has accelerated the development of green energy throughout the world. In 2020–2021, many large economies embarked on a path of decarbonisation as part of their post-pandemic recovery and, in doing so, took measures to limit global warming to 1.5°C. As a result, 20 countries (including the EU and China) have set ambitious targets in the last year to achieve carbon neutrality by the middle of the century. 2020 also saw the initial steps towards cross-border carbon regulation, which the EU plans to introduce in 2023 as part of its implementation of the EU Green Deal. According to EY, the cumulative effect on the Russian economy could reach EUR 15 billion by 2030. The latest evolutionary developments in Russia's energy sector, which include alternative fuels and renewable energy sources and pay particular attention to its natural geography, have a tremendous potential, yet the pace of transformation lags behind the rest of the world. According to international experts, achieving carbon neutrality is a necessary condition for long-term global economic development, and the Arctic region has an important role to play in this. The Arctic is a strategic region for the development of large-scale renewable energy projects and the creation of development clusters across a whole range of industries. The unique natural resources, access to strategic sales markets and the development of the Northern Sea Route represent an unrivalled springboard for the large-scale rollout of ecosystem development programmes based on renewable energy projects and the realization of the region's export potential, while reducing the anthropogenic impact. How can the overall anthropogenic impact and the Arctic's carbon footprint be reduced? Can the industrial development of the Arctic be reconciled with the reduction of the carbon footprint? How can environmentally friendly economic development be made attractive to local communities and business? How can individuals be encouraged to take greater personal responsibility for reducing their carbon footprint?

Moderator:

- **Ryan Chilcote**, TV Host, Special Correspondent, PBS NewsHour

Panellists:

- **Dmitry Borovikov**, Vice President for Strategy, Portfolio Management and Trading,PJSC «Fortum»
- **Alexey Chekunkov**, Minister of the Russian Federation for the Development of the Far East and the Arctic
- **Konstantin Dolgov**, Deputy Chairman of the Committee on Economic Policy of the Federation Council of the Federal Assembly of the Russian Federation
- **Dmitry Gorshkov**, Director, World Wildlife Fund Russia
- **Andrey Grachev**, Vice President for Federal and Regional Programs, Norilsk Nickel
- **Nikolay Korchunov**, Ambassador-at-Large of the Ministry of Foreign Affairs of the Russian Federation
- **Anton Poriadine**, Partner, Leader, EY-Parthenon in CIS; Co-leader of Energy Sector, EY-Parthenon in Europe
- **Anton Rubtsov**, Director of Oil Refining and Gas Complex Department, Ministry of Energy of the Russian Federation
- **Vyacheslav Sinyugin**, Deputy General Director for Digital Transformation and Energy Project of Zarubezhneft
- **Yuriy Vasilyev**, Executive Director of the Arctic Technologies Institute, Moscow Institute of Physics and Technology

Front row participant:

- **Marja Koskela**, Plenipotentiary Minister, Deputy Head of Mission of the Republic of Finland in the Russian Federation

09:30–11:00

Manege 3nd floor
Manege lounge

Business breakfast

Carbon Attack: Development Driver vs Risk of Discrimination?

In partnership with Saint Petersburg International Mercantile Exchange

Breakfast participants will discuss the future global transition to renewable energy sources, the risks of carbon regulation for the Russian economy, the feasibility of creating a national carbon regulation system in Russia, the role of exchange trading in carbon units and many more.

Moderator:

- **Alexey Rybnikov**, President, St. Petersburg International Mercantile Exchange

Panellists:

- **Gennady Alekseev**, General Director, SDS-Ugol
- **Dmitry Borovikov**, Vice President for Strategy, Portfolio Management and Trading,PJSC «Fortum»
- **Andrey Klepach**, Chief Economist, VEB.RF
- **Dmitry Kurochkin**, Vice President, Chamber of Commerce and Industry of the Russian Federation
- **Gennadiy Ordenov**, Member of the Committee of the Federation Council of the Federal Assembly of the Russian Federation on Agriculture and Food Policy and Environmental Management
- **Sergey Roginko**, Head, Center for Ecology and Development, The Institute of Europe, Russian Academy of Sciences (IE RAS); Chairman, Climate Policy Subcommittee, Committee on Energy Strategy and Development of the Fuel and Energy Complex, Chamber of Commerce and Industry of the Russian Federation
- **Pavel Snikkars**, Deputy Minister of Energy of the Russian Federation
- **Valery Subbotin**, Chairman of the Supervisory Board, GreenEco Invest
- **Andrey Trapeznikov**, Co-Chairman of the Committee of the Association of Independent Directors on ESG
- **Anatoly Yanovsky**, Assistant to the Chief of Staff of the Presidential Executive Office of the Russian Federation
- **Alexey Zhikharev**, Director, Russia Renewable Energy Development Association
- **Vasily Zubakin**, Head, Department of Coordination of the Operation and Energy Supply, Lukoil
- **Nikolay Zuyev**, Deputy Chairman of the Government of Krasnyarsk Krai

10:00–11:15

Manege, 1st floor
Plenary conference hall

New Scenarios for the Economy and the Market

The Future of Traditional Energy: Is the World Ready to Eschew Hydrocarbons? (Part 1)

Climate change has become a major challenge for the entire global community, and many experts believe that the answer lies in a global transition to carbon neutral energy. To ensure that this transition can be achieved by the middle of the century, the International Energy Agency (IEA) presented its Net Zero by 2050 roadmap in May 2021. An end to the financing of exploration and development projects at new oil and gas deposits was named among the steps needed to achieve this goal. IEA experts predict that the demand for oil will never return to the peak of 2019 and will steadily decline over the next three decades and, although the demand for gas will grow until the mid-2020s, it will then also begin to decline, reaching 45% of today's levels by 2055. The panel session will see participants discuss whether oil, gas and coal are really losing ground in the global energy mix, whether infrastructure will have time to redirect to new energy sources, how long the hydrocarbons from deposits that are already being developed will last, and whether an 'energy transition' that uses fossil fuels is possible.

Moderator:

- **Ryan Chilcote**, TV Host, Special Correspondent, PBS NewsHour

Panellists:

- **H.E. Suhail Mohamed Al Mazrouei**, Ministry of Energy and Infrastructure of the United Arab Emirates
- **H.R.H. Prince Abdulaziz bin Salman Al Saud**, Minister of Energy of the Kingdom of Saudi Arabia
- **H.E. Mohammad Sanusi Barkindo**, Secretary General, Organization of the Petroleum Exporting Countries (OPEC)
- **Kirill Dmitriev**, Chief Executive Officer, Russian Direct Investment Fund (RDIF) **(online)**
- **Robert Dudley**, Chairman, Oil and Gas Climate Initiative
- **Alexander Dyukov**, Chairman of the Management Board, Chief Executive Officer, Gazprom Neft
- **Alexander Novak**, Deputy Prime Minister of the Russian Federation

10:00–11:15

Manege, –2nd floor conference hall A

Regulatory Advances in Energy

The Development of Electric Power: Maintaining Reliability while Improving Technological Performance

Russia's electricity market model is one of the most advanced in the world in terms of pricing, but it is often insufficient for long-term decisions. What needs to be improved: the planning system or market rules? Is there really a surplus of generation in the country? A sensible generation mix: is there a trade-off between economic efficiency and low-carbon transformation? What are the global trends in the development of long-term planning systems, including in relation to the growth of renewables? How should the need to incorporate significant amounts of renewable generation, characterized by erratic generation and difficulties in dispatching modes of operation, be reflected in the forward planning of power system development?

Moderator:

- **Maksim Bystrov**, Chairman of the Board, NP Market Council

Panellists:

- **Dimitrios Chaniotis**, System Development Committee Chair, ENTSO-E **(online)**
- **Fedor Opadchiy**, Chairman of the Board, System Operator of the United Power System
- **Alexandra Panina**, Member of the Management Board, Inter RAO; Chairman of the Supervisory Board, Council of Power Producers **(online)**
- **Nikolay Rogalev**, Rector, National Research University "Moscow Power Engineering Institute"
- **Andrey Ryumin**, General Director, Chairman of the Management Board, Rosseti
- **Nikolay Shulginov**, Minister of Energy of the Russian Federation

Front row participant:

- **Roman Berdnikov**, First Deputy General Director, Member of the Management Board, RusHydro

10:00–11:15

Manege, –2nd floor conference hall B

Digital Transformation

Deriving Benefits from the Digital Transformation of the Fuel and Energy Sector

Digital transformation is one of the key tools for increasing the efficiency of fuel and energy companies, boosting competitive efficiencies and supporting the climate agenda. The COVID-19 pandemic has demonstrated that the expansion of digital processing, the automation of routine operations and tend-to-end integration of management systems is not just a trend; it is a pressing need that companies must meet. Today, global and Russian business continue to invest in digital solutions, and the state support system for digital transformation is receiving new development incentives thanks to the regulation of big data in industry, the creation of an industrial data ecosystem in Russia, the synchronization of industry and government data markets, and many other initiatives. How might new government initiatives help business to benefit from digital transformation? How has the pandemic affected the digital maturity of fuel and energy companies, and what projects are currently being implemented in the sector? Who are the key players on industry data markets? How should industry data be regulated?

Moderator:

- **Oleg Dubnov**, Vice President, Executive Director, Cluster of Energy Efficient Technologies, Skolkovo Foundation

Panellists:

- **Daria Kozlova**, Director of Consulting in the Fuel and Energy Complex State Regulation Field, VYGON Consulting
- **Tamara Merebashvili**, Deputy General Director, Head of the Corporate and Property Relations Unit, Corporate Secretary, PJSC Inter RAO; Chairman of the Board, Digital Energy Association **(online)**
- **Natalya Nevmerzhitskaya**, Chairman of the Board, Association of Energy Suppliers
- **Pavel Sorokin**, Deputy Minister of Energy of the Russian Federation
- **Oleg Zhdaneev**, Deputy General Director - Head of Import Substitution in Oil and Energy Complex Competence Center, Russian Energy Agency of the Ministry of Energy of the Russian Federation

Front row participants:

- **Igor Bogachev**, General Director, Zyfra
- **Dmitry Klebanov**, Head of the Laboratory of Intelligent Systems and Digital Technologies, Institute for the Problems of Complex Development of Subsoil named after Academician N.V. Melnikov Russian Academy of Sciences
- **Konstantin Kravchenko**, Acting Deputy General Director for Digital Transformation, Rosseti

10:00–11:15

Manege, –2nd floor
conference hall D

Upcoming Technology Solutions

The Future of Russia's Centralized District Heating Infrastructure

In partnership with T Plus

Two thirds of the Russian population enjoy centralized district heating, which has a significant impact on an individual quality of life and the economics of municipal services. State policy is transitioning towards a new way of regulating relationships between customers, suppliers and heat distributors. The new responsible investing agenda (ESG) and climate legislation are driving the establishment of a reliable and environmentally responsible utility infrastructure (electricity, heating, gas and water supply), and the modernization of existing housing stock. A successful alignment with the ESG agenda in the first instance requires refurbishment of the infrastructure that has exceeded its design service life, but also transition to a new technology paradigm that effectively combines centralized district heating and local energy supply solutions in major cities, and an ensures certain level of infrastructure for towns and villages. Is the pace of transformation fast enough? Is the size and pace of investment sufficient? How can the energy efficient renovation of housing stock and public amenities be implemented?

Moderator:

- **Vyacheslav Kravchenko**, Adviser to the Chairman of the Management Board, System Operator of the Unified Energy System

Panellists:

- **Petr Bobylev**, Deputy Minister of Energy of the Russian Federation
- **Dmitry Borovikov**, Vice President for Strategy, Portfolio Management and Trading,PJSC «Fortum»
- **Mikhail Gilev**, Director of Housing and Utilities Department, Ministry of Construction, Housing and Utilities of the Russian Federation **(online)**
- **Yuriy Melnikov**, Senior Analyst, Moscow School of Management SKOLKOVO
- **German Mustafin**, General Director, Siberian Generating Company
- **Andrey Vagner**, Chairman of the Board, General Director, T Plus

12:15–13:30

Manege, 1st floor
Plenary conference hall

New Scenarios for the Economy and the Market

Re-energising Cities and Communities – Progressing Energy Transitions at All Levels of Society

Session in the 'Road to Congress' series to the 25th World Energy Congress, taking place in St. Petersburg, 24-27 October 2022

Creation of an efficient, yet comfortable urban environment is one of the key priorities of urban development and the basis for economic growth. The fuel and energy complex not only provides the basic urban infrastructure, but also influences the atmosphere of the city and the mood of the citizens. The services of the fuel and energy complex should be developed based on the demands of the citizens. It is important for cities to interact with their citizens and involve communities in the decision-making process and in the implementation of projects. In addition, city authorities must create the right conditions to make the city a testing platform for new technologies and business models. How is the fuel and energy complex changing urban development and the perception of the city by its residents? What technologies, solutions and business models in the fuel and energy sector are most in demand by cities and regions? What is the impact of public investment in stimulating private sector investment? What initiatives can a city take to improve efficiency of interaction with its citizens? How to involve citizens in the model of more energy efficient living in the city?

Moderator:

- **Angela Wilkinson**, Secretary General, Chief Executive Officer, World Energy Council (WEC)

Panellists:

- **Mladen Bojanic**, Minister of Capital Investment of Montenegro
- **Barney Crockett**, President, World Energy Cities Partnership (WECP); The Lord Provost of Aberdeen
- **Robert Dudley**, Chairman, Oil and Gas Climate Initiative
- **Andrejs Elksnins**, Mayor of Daugavpils
- **Zlata Sergeeva**, Senior Research Analyst, King Abdullah Petroleum Studies and Research Center (KAPSARC); Participant of Future Energy Leaders Programme, World Energy Council
- **Sergei Sobyanin**, Mayor of Moscow
- **Andrey Vagner**, Chairman of the Board, General Director, T Plus

12:15–13:30

Manege, –2nd floor conference hall A

New Scenarios for the Economy and the Market

The Future of Traditional Energy: Is the World Ready to Eschew Hydrocarbons? (Part 2)

Climate change has become a major challenge for the entire global community, and many experts believe that the answer lies in a global transition to carbon neutral energy. To ensure that this transition can be achieved by the middle of the century, the International Energy Agency (IEA) presented its Net Zero by 2050 roadmap in May 2021. An end to the financing of exploration and development projects at new oil and gas deposits was named among the steps needed to achieve this goal. IEA experts predict that the demand for oil will never return to the peak of 2019 and will steadily decline over the next three decades and, although the demand for gas will grow until the mid-2020s, it will then also begin to decline, reaching 45% of today's levels by 2055. The panel session will see participants discuss whether oil, gas and coal are really losing ground in the global energy mix, whether infrastructure will have time to redirect to new energy sources, how long the hydrocarbons from deposits that are already being developed will last, and whether an 'energy transition' that uses fossil fuels is possible.

Moderator:

- **Ryan Chilcote**, TV Host, Special Correspondent, PBS NewsHour

Panellists:

- **Sergey Kudryashov**, Director General, Zarubezhneft
- **Alexander Novak**, Deputy Prime Minister of the Russian Federation
- **Parviz Shahbazov**, Minister of Energy of the Republic of Azerbaijan
- **Peter Szijjarto**, Minister of Foreign Affairs and Trade of Hungary
- **Daniel Yergin**, Vice Chairman, IHS Markit **(online)**

12:15–13:30

Manege, –2nd floor conference hall B

The Climate Agenda

Russian Energy System and Climate Agenda: Evolution or Revolution

In partnership with Sberbank

Climate risks are currently having an increasingly powerful impact on the economy due to the direct consequences of climate change as well as stricter regulation and changes in the structure of global energy consumption. The world's largest financial institutions refuse to finance or are seriously tightening conditions for financing in the hydrocarbon industry, which has led to capital constraints. The energy transition is fraught with high costs, and Sberbank views financing the green transformation as one of its top priorities. However, the promotion of the energy transition and greening tools is outpacing the adoption of regulations and the creation of a unified strategy, which is needed as a priority step in the energy transition since market players, including banks, need to understand the trajectory of development and come up with new tools and products. If the energy transition is to be implemented in an 'evolutionary' rather than a 'revolutionary' manner, regulators need to promptly respond to new challenges in the Russian energy sector.

Moderator:

- **Maksim Bystrov**, Chairman of the Board, NP Market Council

Panellists:

- **Dmitry Borovikov**, Vice President for Strategy, Portfolio Management and Trading,PJSC «Fortum»
- **Mikhail Khardikov**, Head of Energy Business, En+ Group; General Director, Eurosibenergo
- **Olga Kharlamova**, Vice President - Director of Key Clients Department, Sberbank
- **Kirill Komarov**, First Deputy General Director, Director of the Development and International Business Unit, ROSATOM State Atomic Energy Corporation
- **Oleg Shutkin**, Deputy General Director, Director of Business-Unit Engineering and Generation, Hevel
- **Pavel Snikkars**, Deputy Minister of Energy of the Russian Federation
- **Alexander Starchenko**, Chairman of the Supervisory Board, Energy Consumers Association (ECA); Managing Partner, First Imagine! Ventures **(online)**
- **Sergey Terebulin**, Deputy General Director for Financial and Corporate Legal Management, RusHydro
- **Alexey Zhikharev**, Director, Russia Renewable Energy Development Association

12:15–13:30

Manege, –2nd floor conference hall C

Digital Transformation

How IT Infrastructure Can Be Secured from Cyber Attacks in Times of Transformation

Cybersecurity in the energy sector is growing ever more prominent as a critical infrastructure element. Digital transformation has made the electric power industry a key target for attacks by cybercriminals, making it imperative that all elements of the industry come together and share information on how to address this issue. Who is attacking major enterprises and critical information infrastructure facilities? How can energy companies share information in order to detect, prevent and neutralize the consequences of computer attacks? How can the industry protect distributed infrastructure and monitor contractors? What benefits can industry cooperation bring to the management of cyber risks? What is the role of regulators in the protection of critical facilities and how can import substitution measures be properly implemented in the energy sector? When is the exchange of best practices with the global energy community important and needed?

Moderator:

- **Igor Lyapunov**, Vice President for Information Security, Rostelecom

Panellists:

- **Anastasiya Bondarenko**, State Secretary, Deputy Minister of Energy of the Russian Federation
- **Oleg Gerasin**, Deputy General Director for Security, RusHydro
- **Vitaly Lyutikov**, Deputy Director, Russian Federal Service for Technical and Export Control
- **Yevgeny Miroshnichenko**, Member of the Management Board, Director of the Financial and Economic Centre, Inter RAO
- **Fedor Opadchiy**, Chairman of the Board, System Operator of the United Power System

Front row participants:

- **Vadim Pestun**, Partner and Director of Digital Transformation and Technologies, BCG
- **Anton Semeykin**, Head, Department of Economic Security in the Fuel and Energy Complex, Ministry of Energy of the Russian Federation

12:15–13:30

Manege, –2nd floor conference hall D

Upcoming Technology Solutions

Science and the Fuel and Energy Sector Underpinned by Knowledge Development

2021 has been declared the Year of Science and Technology in Russia. In the context of the global energy transition, knowledge and R&D becomes key to supporting and increasing the competitiveness of the Russian fuel and energy sector, and makes it possible to take advantage of the new opportunities and respond to present challenges. Private investment in R&D is an important factor in the creation of intellectual capital in Russia, and the partnership between science and fuel and energy companies can be characterized by a significant synergistic effect. What are the points of intersection between Russian science and the fuel and energy sector, and where is their interaction seeing the greatest demand? How will generation, transport and energy consumption change in light of the global challenges? How can science help to improve the investment attractiveness of the fuel and energy sector? What areas of development of science and technology in the fuel and energy sector have the greatest potential today?

Moderator:

- **Ivan Lobanov**, Rector, Plekhanov Russian University of Economics

Panellists:

- **Evgeniy Grabchak**, Deputy Minister of Energy of the Russian Federation
- **Alexey Kulapin**, General Director, Russian Energy Agency (REA) of the Ministry of Energy of Russia
- **Sergey Machekhin**, Deputy General Director Project Engineering and International Cooperation, RusHydro

Front row participants:

- **Boris Chetverushkin**, Scientific Director of Keldysh Institute of Applied Mathematics (Russian Academy of Sciences)
- **Alexey Fedorov**, Chief Strategy Officer, QAPP; Junior Principal Investigator of the "Quantum Information Technologies" Group, Russian quantum center **(online)**
- **Ernesto Ferlenghi**, Chairman of the Energy Committee, Chairman of the Steering Committee of the Green Initiative Project, Association of European Businesses (AEB)
- **Nikolay Rogalev**, Rector, National Research University "Moscow Power Engineering Institute"
- **Maxim Safonov**, Director, Green Capital Alliance; Professor, Russian Presidential Academy of National Economy and Public Administration (RANEPA)

14:30–15:45

Manege, –2nd floor conference hall A

The Climate Agenda

The Future of Coal in a World Shaped by the Climate Agenda: The End, or a New Beginning?

The future of coal energy is inextricably tied to the future of the coal market, which is one of the world's largest. Its basic advantages include a relatively low price, abundant reserves and a developed system for supplying the global market, the convenience of creating fuel reserves and independence from weather conditions, and the lack of protected routes and geopolitical restrictions. Coal power generation is the main source of electricity in China, India and many Southeast Asian nations. This is an important factor in the battle to reduce energy poverty and increase employment in coal-mining regions. The prospects for the global metals industry, primarily steel, manufacturing and related industries such as construction, are at present largely determined by the supply and cost of coking coal. We are seeing a post-crisis recovery in demand for this type of coal. Platts analysts noted a sharp, 2.8-fold increase in the volume of spot transactions for premium coking coal in the first half of 2021, which in turn led to a rapid rise in prices for this fuel type. At the same time, the move towards an energy transition is rapidly gathering pace around the world. It aims to gradually displace fossil energy resources and primarily coal from the fuel balance of power plants and the fuel and energy mix in general in order to achieve carbon neutrality, in part through the introduction of various regulatory measures. What is most likely to occur over the coming decades is the concurrent development of the innovative coal market, coal power generation and the energy transition, with these processes affecting each other in various ways. This will have an impact on the lives and wellbeing of tens and hundreds of millions of people. Looking to the international community, what is the future of global coal energy, and is Russia in keeping with the times? When will hydrogen be able to compete with coal in metallurgy, and in what technological processes? Is the greening of coal energy desirable, taking into account the development of other energy sources? What support measures are required in order to give coal energy a 'fresh start'? What are the prospects for Russian power generating coal and coking coal on the world market? How justified are plans to maintain coal power generation volumes in Russia to 2035, taking into account the consequences of the coronavirus pandemic? How can an economically sound and strategically aligned approach to coal power generation that is based on the potential for future transformations be created in the new conditions?

Moderator:

- **Sergey Brilev**, Anchor; President, The Global Energy Association

Panellists:

- **Matthew Boyle**, Manager, Global Coal and Asia Power Analytics, S&P Global Platts **(online)**
- **Michelle Manook**, Chief Executive Officer, World Coal Association (WCA)
- **Sri Ram Chandra Prasad Singh**, Minister of Steel of the Republic of India
- **Pavel Snikkars**, Deputy Minister of Energy of the Russian Federation
- **Stephan Solzhenitsyn**, Chief Executive Officer, SUEK
- **Sergey Tsivilev**, Governor of Kemerovo Region-Kuzbass
- **Anatoly Yanovsky**, Assistant to the Chief of Staff of the Presidential Executive Office of the Russian Federation

Front row participants:

- **Zinfer Ismagilov**, Director, Institute of Coal-chemistry and Material Science of the Siberian Branch of the Russian Academy of Science
- **Irina Zolotova**, Director of Center for Sectoral Research and Consulting, Financial University under the Government of the Russian Federation

14:30–15:45

Manege, –2nd floor conference hall B

Upcoming Technology Solutions

Overcoming the Barriers with Energy Transition Technologies

The global low-carbon agenda is a major determinate for climate policy in many countries. Governments can mitigate greenhouse gas emissions by adopting an integrated approach, taking advantage of all the opportunities and technologies aimed at low-carbon development, capture and mitigation (CCS/CCUS, SRM, CDR), higher energy efficiency and monitoring of emissions including CO2. Russia is among the countries in which low-carbon energy technologies are currently in active development. Decarbonization, decentralization and digitalization are main areas of development in the Russian fuel and energy sector, with the aim of making domestic goods and services competitive by reducing their carbon intensity. In order to achieve the goals of counteracting climate change and ensuring a strong presence on global high-tech markets, however, the country also needs to develop end-to-end technologies, including in extraction and use of rare-earth metals as well as in the digital sphere (Industry 4.0, smart grid). What are the technological challenges associated with the energy transition? What are there barriers to the introduction of low-carbon development technologies and what steps can be taken for removing them? What expertise, personnel and materials will be required in order to secure Russia's position itself as a key player on the global market for energy transition technologies? What are the opportunities for

international cooperation?

Moderator:

- **Oleg Zhdaneev**, Deputy General Director - Head of Import Substitution in Oil and Energy Complex Competence Center, Russian Energy Agency of the Ministry of Energy of the Russian Federation

Panellists:

- **Vladimir Andreev**, Acting Deputy General Director – Chief Engineer, Russian Railways
- **Sergey Kulikov**, Chairman of the Board, RUSNANO
- **Andrey Laptev**, Director for Business Development and Corporate Venture Projects, Severstal Management
- **Dmitry Peskov**, Special Representative of the President of the Russian Federation on Digital and Technological Development
- **Evgeniy Petrov**, Acting Head, Federal Agency for Mineral Resources (Rosnedra)

Front row participants:

- **Karim Amin**, Executive Vice President for Generation, Siemens Energy AG
- **Yi Cui**, Director, Precourt Institute for Energy, Stanford University
- **Daria Kozlova**, Director of Consulting in the Fuel and Energy Complex State Regulation Field, VYGON Consulting

14:30–15:45

Manege, –2nd floor conference hall C

New Scenarios for the Economy and the Market

Growing Markets in the Renewable Energy Industry: The Potential for Russia to Export Renewable Generated Energy to Europe

The world is entering an era of energy transition, with more countries declaring their targets for achieving carbon neutrality, and in particular, the European Union plans to become carbon neutral by 2050. Germany is pursuing the even more ambitious goal of moving towards zero CO2 by 2045. In pursuing these goals, both Europe and Germany will soon find themselves dependent on imports generated from renewable energy sources. While political discussions are focused on hydrogen in its various forms, there are additional routes for energy exports from Russia into Europe. The Kola Peninsula and a number of other Russian regions have great potential for generating electricity from wind power. Proximity to the Scandinavian energy market with its vast capacity for pumped-storage hydroelectricity, as well as the ability to lay submarine cables to Germany along the Baltic Sea represent a business case deserving of further study. What are the projections for the decarbonization of Europe, and is there an opportunity for Russian-German cooperation in this area? Is an energy bridge project to deliver electric power from Russia to Germany feasible?

Moderator:

- **George Kekelidze**, Chairman of the Board, EUROSOLAR Russia Association for Renewable Energy

Panellists:

- **Dmitry Borovikov**, Vice President for Strategy, Portfolio Management and Trading,PJSC «Fortum»
- **Bernd Engel**, Director, Institute for High Voltage Technologies and Energy Systems, Braunschweig University of Technology **(online)**
- **Andre Fritsche**, Director, Governmental Relations Department, German-Russian Chamber of Commerce; Representative of the Federal State of Hesse in the Russian Federation
- **Egor Grinkevich**, Deputy General Director for Development of Technical and Regulatory Regulation of Wind Power Plants, NovaWind
- **Kristina Haverkamp**, Managing Director, German Energy Agency (dena) **(online)**
- **Aleksandr Ilienko**, Deputy Chairman of the Management Board - Head of the UES Development Directorate, System Operator of the Unified Energy System
- **Alisher Kalanov**, Head of the Investment Division, RUSNANO
- **Alexey Kulapin**, General Director, Russian Energy Agency (REA) of the Ministry of Energy of Russia
- **Matthias Luther**, Professor, Department of Electrical Engineering, Department of Electric Power Systems, University. Frederick - Alexander in Erlangen and Nuremberg **(online)**
- **Alexandra Panina**, Member of the Management Board, Inter RAO; Chairman of the Supervisory Board, Council of Power Producers **(online)**
- **Maria Pastukhova**, Fellow, German Institute for International and Security Affairs (SWP) **(online)**
- **Alexey Zhikharev**, Director, Russia Renewable Energy Development Association
- **Stephane Zweguintzow**, General Director, Enel Russia

Front row participant:

- **Mikhail Kamyshev**, General Director, Oil-Service

14:30–15:45

Manege, –2nd floor conference hall D

The Human Resource Potential of the Fuel and Energy Sector

Prospects for Developing the Professional Qualification System for the Energy Industry

Strategic priorities for developing the industry's professional qualification system and under discussion and experts are examining what tools could be used to increase the flexibility of the professional qualification system and ensure immediate synchronization with existing production processes. What support systems and approaches could lead to the pre-emptive creation of qualification requirements and professional standards for employees? What is the value of an independent assessment for qualifications, and what are challenges and opportunities for scaling up such a system across the fuel and energy sector? How might the experience of independent assessors of the quality of educational programmes, including public accreditation, come into play?

Moderator:

- **Arkadiy Zamoskovny**, General Director, Association of Electric Energy Employers

Panellists:

- **Anastasiya Bondarenko**, State Secretary, Deputy Minister of Energy of the Russian Federation
- **Pavel Ivanov**, Director, Center for Planning and Use of Labor Resources of Gazprom
- **Julia Kuznetsova**, Acting Deputy General Director for Human Resources, Rosseti
- **Yury Pikhtovnikov**, Head of the Department of Organizational Development and Career Management, PJSC LUKOIL **(online)**
- **Nikolay Rogalev**, Rector, National Research University "Moscow Power Engineering Institute"
- **Artem Shadrin**, General Director, National Agency for Qualifications Development

16:45–18:00

Manege, –2nd floor conference hall A

Regulatory Advances in Energy

A System of Mutual Recognition for the Certification and Exchange of Carbon Credits in Russia

In partnership with En+ Group

In light of the rise of the global ESG agenda, as well as the planned introduction of cross-border carbon regulation in Europe, the task of confirming the carbon neutrality of power generation is becoming more urgent. At present, Russia's system for tracking, recording and trading carbon units is not systematized at the national level, nor is there a unified system of certification and mutual recognition to acknowledge reductions in emissions of CO2 and its equivalents. To fill this gap, the Russian Ministry of Energy has devised an initiative to amend legislation and create a national Russian certification system. At the same time, a number of international certification systems are already being adopted in the country. Individual market participants can also confirm their green credentials with the help of other tools. How will the Russian and international certification systems compare? How can the double counting of the same electricity volumes across different systems be avoided and their integration ensured? What should the certification market look like and who does it benefit? How can Russia and foreign countries more effectively cooperate on developing certification systems and reduce the impact of manmade emissions on the environment?

Moderator:

- **Milena Milich**, ESG Director of the Far East Region, Sberbank

Panellists:

- **Oleg Barkin**, Member of the Board, Deputy Chairman of the Board, NP Market Council
- **Denis Deryushkin**, Deputy General Director - Head of Analytical Center, Russian Energy Agency of the Ministry of Energy of the Russian Federation
- **Vincent-Michel Duval**, Executive Director, Director General, Global Sustainable Electricity Partnership (GSEP)
- **Mikhail Khardikov**, Head of Energy Business, En+ Group; General Director, Eurosibenergo
- **Alexey Khersontsev**, State Secretary – Deputy Minister of Economic Development of the Russian Federation
- **Sergey Kirov**, Member of the Board, First Deputy Director General, RusHydro
- **Andrey Maximov**, Head of the Department of Electric Power Development, Ministry of Energy of the Russian Federation

- **Alexandra Panina**, Member of the Management Board, Inter RAO; Chairman of the Supervisory Board, Council of Power Producers **(online)**

16:45–18:00

Manege, –2nd floor conference hall B

New Scenarios for the Economy and the Market

International Energy Organization Dialogue: Predicting the Development of Energy and Global Markets

The energy transition is gaining momentum the world over. The rise of the global climate agenda, the accelerated deployment of modern technologies, increased generation from renewable energy sources and the emergence of new energy carriers are all rapidly developing trends, altering the state of play in today's global markets and introducing uncertainty to the strategic vision of the global energy future. According to a number of international think tanks, the world may well be on a new development path by 2050. There are, however, many challenges on the way, including the immediate need to revitalize the economy in the wake of the COVID-19 pandemic, the limitations of current technology, the high investment burden for many new solutions, and the fact that, according to UN estimates, one-fifth of the world's population still doesn't have access to electricity. In the year of the 55th anniversary of the Russian Energy Agency, the Ministry of Energy of the Russian Federation invites experts from key international research organizations to discuss the future of global energy. What will the global energy mix look like in 2050? When will the energy transition be achieved in every country? How can we overcome the many major challenges along the way?

Moderator:

- **Tadzio Schilling**, Chief Executive Officer, Association of European Businesses (AEB)

Panellists:

- **H.E. Mohammad Sanusi Barkindo**, Secretary General, Organization of the Petroleum Exporting Countries (OPEC)
- **Karen Kostanian**, Head of Russian Equity Research Department, Merrill Lynch Securities
- **Alexey Kulapin**, General Director, Russian Energy Agency (REA) of the Ministry of Energy of Russia
- **Yury Plakitkin**, Head of Center for Analysis and Innovation in Energy, Energy Research Institute of the Russian Academy of Sciences
- **H.E. Yury Sentyurin**, Secretary General, Gas Exporting Countries Forum (GECF)

Front row participant:

- **Deb Ryan**, Head Low Carbon Market Analytics, S&P Global Platts **(online)**

16:45–18:00

Manege, –2nd floor conference hall C

The Human Resource Potential of the Fuel and Energy Sector

Bringing the Woman's Dimension to the Fuel and Energy Sector

There is a debate as to the correct target model for a socially oriented energy sector, with corporate social responsibility making up a necessary part of an energy transition that improves the quality of life. Are there particular advantages to having a gender-balanced approach to management including strategic risk assessment, negotiation and operations? What corporate practices should be implemented in order to provide adequate social support to professional women in particular? What should be done to bring a better balance between professional and family obligations for both men and women? How can better gender balance management help companies expand corporate development horizons?

Moderator:

- **Olga Golyshenkova**, President, Association of Civilians and Organizations for Corporate Learning and Development MAKO

Panellists:

- **Anastasiya Bondarenko**, State Secretary, Deputy Minister of Energy of the Russian Federation
- **Tamara Merebashvili**, Deputy General Director, Head of the Corporate and Property Relations Unit, Corporate Secretary, PJSC Inter RAO; Chairman of the Board, Digital Energy Association **(online)**
- **Natalya Nevmerzhitskaya**, Chairman of the Board, Association of Energy Suppliers
- **Maria Tikhonova**, Deputy General Director for Regulatory Relations, Rosseti
- **Zhanat Zhakhmetova**, Vice-Minister of Energy of the Republic of Kazakhstan **(online)**

16:45–18:00

Manege, –2nd floor conference hall D

Upcoming Technology Solutions

Green Energy in the Arctic

As part of the Green Energy in the Arctic Conference

The priority of Russia's chairmanship in the Arctic Council is 'Responsible Governance for a Sustainable Arctic'. In this context, the region's development should not only take into account the vulnerability of the Arctic, but also its potential contribution to the transition to a low-emission economy and, consequently, to the fulfilment of the goals and objectives of the Paris Climate Accords. Regional development must be based on advanced innovative technologies, including expanding the use of renewable energy sources to improve the living standards of the Arctic people. Numerous new challenges, including the growing role of renewable energy sources, involve complex issues that go beyond technologies in such areas as the economy, regional development, and many more. This integrated approach helps developing a 'transformational dialogue' to voice, understand, and resolve the various aspects of these complex problems through equal participation of all stakeholders. What challenges and threats does the Arctic face amidst this 'technological transition'? What are the prospects for developing nuclear power generation in the Arctic? Can the development of hybrid energy projects in the Arctic (diesel generation + RES) increase the availability of renewable energy for consumers in the Arctic zone of the Russian Federation? How can the development of a gas chemical cluster based on the resources of the Yamal Peninsula contribute to a low-emission economy?

Moderator:

- **Maksim Nechaev**, Director for Consulting, IHS Markit Russia

Panellists:

- **Roman Berdnikov**, First Deputy General Director, Member of the Management Board, RusHydro
- **Darya Gerasimenko**, Professor of Sustainable Development, Advisor to the Rector, Samara National Research University named after academician S.P. Queen; Ph.D., University of Finance Switzerland St. Gallen (HSG) **(online)**
- **Nikolay Korchunov**, Ambassador-at-Large of the Ministry of Foreign Affairs of the Russian Federation
- **Svendsen Peter**, Commercial director, Wavepiston **(online)**
- **Vasiliy Potemkin**, Managing Director, Far East and Arctic Development Corporation
- **Vyacheslav Sinyugin**, Deputy General Director for Digital Transformation and Energy Project of Zarubezhneft

Front row participant:

- **Falk Tischendorf**, Official Representative of the Federal State of Mecklenburg-Western Pomerania (Germany) in Russia; Head, Russian Practice of ADVANT Beiten; Chairman of the Committee for Localisation and Industrial Production, Russian-German Chamber of Commerce