

International wind energy forum

RAWI FORUM 2020

February, 19-20 / Moscow

World Trade Centre



<https://rawi.ru/en/events/rawi-forum/>

SCENARIO

FEBRUARY 19, WEDNESDAY
"GLOBAL TRENDS"

09.00 – 09.30
a.m. Welcome reception. Coffee reception.

09.30 – 10:00 **PARTNER PRESENTATION**

10:00 a.m.–
12:00 p.m. Plenary
hall «Wind Energy in Russia: Priority or Experiment?»
plenary sitting

Wind energy with ever increasing frequency is mentioned as the leading source of energy in Europe by 2030 and the 'backbone of the energy transition'. This embracement in itself is a major achievement for the wind industry. But are we striving to modernise Russia's power supply system? Is there a room for renewable energy in it? What are the possible future scenarios for the development of the wind industry in Russia? The Russian renewable energy support programme is said to be one of the best in the world, but will it further stimulate investment and determine the rate of transition or downright prevent it?

The session will bring together representatives of the authorities and heads of major international and Russian companies that are creating the wind industry of the future in Russia today, who will express their views on the future of the wind energy in Russia.

Moderator: Jeroen Ketting, the founder of The Lighthousegroupe consulting company

Subjects:

- ✓ Global renewable energy development trends, the main players.
- ✓ What value is placed on renewable energy in the Russian Federation's energy mix?
- ✓ What is the role of wind energy among all renewable energy segments?
- ✓ What are the priorities for further development of global and Russian wind

energy?

- ✓ Are the government support and localisation the factors that deter or accelerate the market? How can they be properly balanced?
- ✓ RES CDA 2.0, private contracts; where will the reduction lead

Speakers and Participants:

- Stefan Gsänger, Secretary General of WWEA, World Wind Energy Association
- Carsten Søndergaard, the Ambassador of Denmark in the Russian Federation
- Daniil Solomonov, General Director of Siemens Gamesa Renewable Energy, Russia
- Kimal Yusupov, Managing Director of Vestas Russia and Vestas Manufacturing Russia
- Igor Bryzgunov, Chairman of Russian Association of Wind Power Industry (RAWI)
- Aleksandra Klassen, RE100 Senior Impact Manager, The Climate Group
- Oleg Barkin, Member of the Management Board - Deputy Chairman of the Management Board NP Market Council
- Dr. Roland Roesch, Professor for Energy Economics Deputy Director, IRENA Innovation and Technology Center (IITC)

Representatives of the Ministry of Industry and Trade of the Russian Federation, the Ministry of Natural Resources and Ecology of the Russian Federation, the Ministry of the Russian Federation for the Development of the Far East and the Arctic are expected

12:00 – 12:40 p.m. Plenary hall	Presentation of the Russian Wind Energy Market Review for 2019. RAWI-2019 Rating
12:00 – 13:30 p.m. Conference hall	RE100 Meeting (invite only)
12:40 – 13:00 p.m.	Media briefing
13:00 – 14:00 p.m.	Lunch break
14:00 – 15:40 p.m. Plenary hall	«Wind energy and global climate change. Wind energy ecology» panel discussion
	<p>On September 23, 2019, Dmitry Medvedev signed a decree on the adoption of the Paris Agreement on Climate, which should regulate measures to reduce carbon dioxide emissions starting from 2020. At the same time, public authorities talk about the plans to use natural gas in the medium- and long-term, as an ecological energy source on the way to decarbonisation; what is that, is that doublespeak?</p> <p>With that, the legends and myths about natural environment damage caused by wind turbines, their influence on flora and fauna continue to be used as an instrument of environmental blackmail and influence public opinion. Does the market need to pay more attention to explaining the environmental neutrality of wind energy and cooperation with academics?</p>

Moderator: Mikhail Yulkin, Director General of the Environmental Investments Centre

Subjects:

- ✓ Will the renewable energy and the wind energy, in particular, become part of a major project of decarbonisation and human impact on global climate change reduction?
- ✓ What do experts say about global warming and what actions are being taken by the world's governments?
- ✓ Ratification of the Paris Agreement by the Russian Federation: potential effect on the development of the renewable energy sector.
- ✓ Is there any harm from the renewable energy and wind power generation? How do we measure it?
- ✓ Renewable energy impact on the environment: experts opinion.
- ✓ The existing system of various generation technologies analysis.

14:00 - 15:40

p.m.

Conference hall

«Wind energy financial instruments» discussion

The session participants will consider the possibilities and prospects of financing new RES-based projects in Russia. What influences investment decisions and what are the current criteria for project financing? Do large financial institutions have an appetite for Russian wind energy projects? The agenda includes mechanisms to increase the investment attractiveness of the wind power plant projects and risk management as one of its most important elements.

Moderator: Vyacheslav Sinyugin, Advisor to Director General of the Zarubezhneft JSC

Subjects:

- ✓ How are RES-based projects financed today in Russia? Level of sufficiency and diversity of financing instruments.
- ✓ What is the driver for reducing the cost of electricity generation from wind turbines?
- ✓ What will be the reason for price parity, either reduction of the electricity cost or the market price increase?
- ✓ Regional experience in terms of attraction of financing for implementation of wind power generation projects.
- ✓ Russian financial players have already entered the projects. Will international financial corporations and banks join them?
- ✓ Debt financing is burdensomely expensive, which increases the LCOE (levelised cost of electricity) and CAPEX (capital expenditures) of projects. Can the cost of capital be reduced?
- ✓ Other instruments to ensure project financing. What services do insurance companies and consultants offer?
- ✓ To what extent are the current renewable energy market players qualified to adequately assess investment risks?
- ✓ Proper risk management as an essential element of investment attractiveness.
- ✓ What changes should the renewable energy financing market in Russia undergo in order to ensure that LCOE is reduced at the level of global tendencies?

15:40 – 16:00 p.m.	Refreshment break
16:00 - 17:30 p.m. Plenary hall	<p>«Wind energy market segments in Russia: issues and prospects» session</p> <p>RES CDA 2.0 is being launched for 10 years in a relatively small volume. Where do we find resources to increase the programme? Will wind energy be able to compete with conventional energy in tenders?</p> <p>The market for direct contracts in the wind energy sector is underestimated by investors. Until now, market participants are ‘skimming the cream off’, developing projects in the wholesale market, leaving the enormous opportunities of the retail market and the market of direct contracts aside, which, despite the latter has its own legislative regulation, it does not stimulate the development of projects in this segment. There are no projects in the niche of electricity purchase to compensate losses of grid companies; there is no presence of Re100 companies in the market. What do we lack for an investor to believe in this market? What new opportunities lie in other market segments?</p>
	<p>Moderator: Oleg Barkin, Member of the Board, Deputy Chairman of the Board, NP Market Council</p>
	<p>Subjects:</p> <ul style="list-style-type: none"> ✓ CDA 2.0 investment resource allocation: what will outweigh? ✓ Which segments of the wind energy market are inactive in Russia? ✓ Does the retail market have any prospects? What hinders its development? ✓ Does Russia need offshore wind? ✓ RES-based projects for remote and isolated power grids: what are the mechanisms of transition from pilot projects to mass penetration? ✓ Do the market participants have stomach for microgeneration? ✓ PPAs (direct contracts); are they possible in the current legal environment? What changes does it take to protect investors and consumers? ✓ What is the estimated market capacity of the PPA segment in Russia? At what LCOE values does this segment unlock? ✓ Large users; who are they? Are they ready to work on projects and sign PPAs even today? What additional conditions should be provided?
16:00 – 17:30 p.m. Conference hall	<p>«Small wind power generation. How to get the market spinning up?» session</p>
	<p>RES-based generation can be considered as an economically efficient source of energy supply for more than 100 thousand communities throughout Russia, including the northern territories. There is a great potential for the introduction of such systems for the Northern Sea Route infrastructure facilities, as well as for the power supply of the facilities of the Ministry of Defense of the Russian Federation, the Ministry of Natural Resources and private farms. The participants of the session is to answer the questions on the conditions of stimulation of the use of wind energy systems as an alternative and supplement to the energy supply from hydrocarbon energy carriers.</p>
	<p>Moderator: Andrey Redkin, Director General of Altren, LLC.</p>

	<p>Subjects:</p> <ul style="list-style-type: none"> ✓ What hinders wind energy development in the retail market for electricity and power? ✓ Do we have the means to solve the problem of development of large and medium wind energy projects in the retail market? ✓ What is the probability of development of such projects in the near future? ✓ What is the profile of a consumer of such energy? ✓ How to solve the issue of tariff increase? ✓ Will large consortiums be created in this segment of the market, like it already happened in the utility-scale wind industry? What does it take? ✓ What mechanisms already exist to support projects of autonomous hybrid energy systems? Do we need new mechanisms? ✓ What is the servicable and obtainable volume of the attractive investment market in this segment? What decisions can be made to increase it? ✓ Manufacture of equipment for autonomous hybrid power supply systems on the basis of RES and low-power wind turbines. What is being produced in Russia now? Do we need localisation requirements?
19:00 – 21:00 p.m.	Networking, cocktail dinner
FEBRUARY 20, THURSDAY «BEST PRACTICES»	
09:00 – 09:30 a.m.	Welcome reception. Coffee reception.
09:30 – 10:00 a.m. Plenary hall	PARTNER PRESENTATION Mitsubishi Chemical Advanced Materials B.V.
10:00 – 11:30 a.m. Plenary hall	<p>«Development and construction of wind power plants: transition from pilot projects to large-scale ones» session</p> <p>The session is devoted to competencies in the design and construction of wind power plants.</p>
	<p>The first facilities have already been built and are in operation. Mishandlings and limitations have become clear, and successful projects also confirm that the Russian experience is a go. The market has to respond to the new challenge, how to create, design and build a large number of massive wind farm projects? Reducing capital expenditures as a result of tenders and further struggle for LCOE impose new requirements; projects should be more efficient, faster, more economical. The speakers will discuss the specifics of the Russian wind power plant design and construction market in Russia and exchange best practices.</p> <p>Moderator: Kulakov Andrey, Founder of the Goal Number Seven Association.</p>
	<p>Subjects:</p> <ul style="list-style-type: none"> ✓ What is an effective WPP construction project? What conditions are necessary to increase efficiency? ✓ Each generating company owning a wind farm in Russia has its own

experience. What experience should be adopted and turned into standards?

- ✓ Wind farm design and construction technologies, the peculiarities given Russian circumstances.
- ✓ Monitoring of RES-based facilities, including digitalisation, drone surveillance, and application of robots.
- ✓ What further changes in construction and technical regulation are needed for RES-based facilities?
- ✓ What is the current environment in the design, construction and development among the market players? Is there still a room in this market?

10:00 – 11:30

a.m.

Conference hall

«Wind energy labour market» session

The development of the renewable energy market dictates the creation of jobs for the needs. Which segments of the RES market have shortages of personnel and qualifications? Is the RES market employer ready to pay for the development of science and educational programmes? What should be the future of education in Russia?

Moderator: Olga Ukhanova, Head of the Wind Energy Technologies Department of the Ulyanovsk State Technical University and the “Wind energy technologies” nanotechnology centre.

Subjects:

- ✓ Wind energy labour market; offer and demand, deficits and trends; forecasts for Russia and the world.
- ✓ Is it a challenge for business or the government? Who is the customer of qualifications in the labor market?
- ✓ From technology transfer to knowledge transfer: cooperation with foreign universities to create high-quality educational content.
- ✓ Additional training and education strategies: professional development and training, corporate demand for educational programmes for working professionals; who will cover this demand?
- ✓ How do wind power engineers train in well-established markets; European universities' network programmes, online master's degree programmes.
- ✓ International educational initiatives and associations for the development of wind energy education programmes: For Wind, etc. Experience, challenges.
- ✓ Wind energy for children: hobby groups, cases and contests; promotion of renewable energy, socially responsible business and employer public image. Intergovernmental agreements in the education; opportunities for exchange of students and joint research (Embassy of Denmark)

11:30 - 11:45

a.m.

Refreshment break

**11:45 a.m. -
13:15 p.m.**

Plenary hall

«Localisation of wind turbine components manufacturing in Russia: new regulations» session

Co-organiser: Ministry of Industry and Trade of the Russian Federation

Thanks to the strong legislative incentive in the country, a new wind energy industry has been created for the last three years and a new high-tech wind energy market has been formed. Production facilities were opened, three major wind turbine manufacturers brought their technologies to the market, and many international and

domestic companies expanded their activities in Russia, making the country part of a complex supply chain. The session participants will discuss possible next steps and scenarios for the development of this industry in Russia.

The session is devoted to further development of production of components for wind turbines in Russia and ensuring optimal interaction between suppliers and key customers of the industry.

Moderator: Oleg Tokarev, power engineering and localization of industrial equipment expert

Subjects:

- ✓ The level of localisation achieved today, what has been done and what is yet to be done?
- ✓ Which components are critical? What can and cannot be produced in Russia? Which components will make the greatest contribution to the country's economy?
- ✓ What components, materials and raw materials are in demand now? Do the demands of different equipment manufacturers (OEMs) coincide?
- ✓ Transition from localisation of one wind turbine model to localisation of a series of models – to which extent is it possible and justified? What are OEM's plans?
- ✓ Quality and caliber of Russian suppliers. Are those fine with OEMs? Do OEMs want to expand cooperation?
- ✓ Are foreign manufacturers ready to enter the Russian market? What is the main model of their entry (partnership/solo; brownfield/greenfield), actual cases?
- ✓ Are there opportunities to export localised equipment?
- ✓ Will it be possible to localise equipment for other segments?

**11:45 a.m. -
13:15 p.m.
Plenary hall**

Wind energy logistics

Wind power equipment is of a fairly large size, weight and design features and in most cases requires the transportation of large numbers of oversized elements from one continent to another from the manufacturer to the installation site. The implementation of such projects requires specialised equipment, optimisation of the supply chains of the wind turbine equipment, creation of road and port infrastructure and detailed planning of the entire process. The participants of the session will answer the questions whether the construction of a wind power plant will become a new driver of growth for the entire spectrum of project logistics in Russia.

Moderator: Sergey Evmenenko, Chief Commercial Officer of the Heavy world, LLC

Subjects:

- ✓ Wind energy logistics: best practices in Russia
- ✓ Optimisation of supply chain management in Russia. How to avoid inaccurate planning?
- ✓ New technologies in transport and warehousing logistics. Road and port infrastructure.
- ✓ Do logistics requirements change with the increase in construction of wind energy facilities?

	<ul style="list-style-type: none"> ✓ Logistical opportunities for the transportation of wind energy components; motor transport, maritime logistics, railways, aviation. In what cases is which efficient? ✓ Customs clearance and control procedures. Do we need simplification of procedures? ✓ Solutions for hard-to-reach regions.
13:15 - 14:15 p.m.	Lunch break
14:15 - 14:45 p.m.	Workshop "Procurement in renewable energy for projects of UN organisations"
14:45 – 16:15 p.m. Conference hall	<p>«New technologies in wind energy» session</p> <p>Wind power industry is the most dynamically developing renewable energy industry. Creation and appearance of new technological solutions takes place in it constantly and in all segments. Both in the creation of infrastructure for wind energy; logistics, transport, lifting technology, design, construction, offshore technology, and in the design and manufacture of wind turbines themselves. The reason for the dynamic development of wind energy technologies is the demand of the market for reduction of electricity production costs. In addition to wind power generation technologies themselves, this segment also creates preconditions for the development of converged technologies, such as industrial energy storage systems, big data analysis, smart grid management and traffic arbitrage, etc. What other technologies and this respect globally? What has already become interesting in Russia?</p> <p>Moderator: Igor Bryzgunov, Chairman of the Russian Association of Wind Power Industry.</p> <p>Subjects:</p> <ul style="list-style-type: none"> ✓ What is the request stated by the developing wind energy industry? To what extent are these technologies already present in Russia? ✓ Big data processing systems are wind analytics. ✓ Industrial-scale energy storage systems; are OEMs ready for cooperation? ✓ Control and traffic arbitrage systems; how relevant are Russian developments in this area? ✓ “Strange wind turbines”; is the current technology the only effective one or are alternatives to it possible? In which purview can such solutions lie? ✓ What opportunities does the new market offer for Russian science and engineering? How useful can Russian science be in the development of the industry? ✓ How to launch joint projects with Russian and foreign developers? Possibilities of financing the developments ✓ Are OEMs ready to cooperate in R&D programs? How do joint projects work; what demands do OEMs place on their partners?
16:15 -16:30 p.m.	Refreshment break
16:30 – 17:30 p.m.	RAWI member’s presentations Introduction of new members

Conference hall	Moderator: Igor Bryzgunov , Chairman of the Russian Association of Wind Power Industry
12:00 – 16:30 p.m. February 19-20 Meeting rooms	Forum of suppliers Hushed B2B business meetings of equipment suppliers with representatives of generating companies and equipment manufacturers (OEMs), which implement their projects in Russia

***Changes may appear in the scenario
(draft as of 18.02.2019)**