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Green Belarus News & Events in Belarus

Belarus to mark Year of Science With over 60 events

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Over 60 events will be held to mark the Year of Science in Belarus, Chief Academic Secretary of the National Academy of Sciences of Belarus (NASB)

Alexander Kilchevsky said during the presentation of the Year of Science on 6 January, BelTA has learned.



"The Academy of Sciences has prepared a comprehensive plan of events for the Year of Science. The document has been drafted by 33 ministries and government agencies. The plan consists of 13 chapters and includes over 60 events. The Year of Science will aim to make Belarusian science open to

the society, to show how an idea develops into a product," Alexander Kilchevsky noted.

He stressed that the plan will focus on the support for talented youth.

During the presentation, Chairman of the NASB Presidium Vladimir

Gusakov said that the work to design the Year of Science logo is underway, and the result will be presented at the end of January. "What is more, it is necessary to set up a Strategic Council of the Year of Culture consisting of senior executives and leading researchers from different branches of science. Plans have been made to launch a nationwide competition for the best pro-

ject in fundamental and applied research, in the humanities, for the best youth project, and the most successful project implementation," Vladimir Gusakov said.

He added that 2017 will see important international forums: the first symposium on the academic basis of the Belarusian statehood, the 7th Belarusian Space Congress, the first Belarusian congress on national philosophy in the modern world, and the congress 500 Years of Belarusian Book Printing. Special attention will be paid to the nationwide contests of innovation projects, of student research projects, and projects of the 100 Ideas for Belarus initiative.

BELTA,
6.01.2017

[Gusakov: Some 85% of science investment funneled into applied research](#)

[Belarusian R&D park Belbiograd projects to earn \\$500m by 2023](#)

[Belarus to increase funding of promising, high-risk projects](#)

Part of second structure of Belarusian Antarctic station assembled

Belarusian polar explorers have assembled part of the second structure of the Belarusian Antarctic station, BelTA learned from Sergei Usanov, Academician-Secretary of the Chemistry and Earth Sciences Department of the National Academy of Sciences of Belarus (NASB), during the presentation of the Year of Science in Belarus on 6 January.

According to the source, the Belarusian polar explorers arrived in Antarctica on 29 December. About 40 tonnes of cargoes was transported to the Belarusian station at Mount Vechernyaya. Over the course of several days the polar explorers managed to assemble a platform and one of the sections of the second structure of the Belarusian Antarctic station.

The Belarusian polar explorers have started working on their own. A number of scientific researches are

scheduled to take place in 2017. In particular, spectrum equipment of the Belarusian satellite BKA and the Russian satellite Canopus-B will undergo radiation calibration using the snow surface of Antarctica. The specialists will evaluate the possibility of using the local biological resources. The atmosphere and the surface of Antarctica will be monitored. Some climate-related researches will be done.

The current Belarusian Antarctic expedition began in the National Academy of Sciences of Belarus in late October 2016. In early November about 40 tonnes of expedition cargoes, including parts of the second structure of the Belarusian Antarctic station, was shipped from

Minsk to Saint Petersburg where it was loaded onto the Akademik Fedorov research vessel. In mid-November the personnel of the Belarusian Antarctic expedition started the journey to Antarctica. The expedition comprises six people.



The deployment of the Belarusian Antarctic station is part of a subprogram of the government program on new and high technologies and machines in 2016-2020. The subprogram provides for monitoring polar regions of the Earth, creating the Belarusian Antarctic station, and enabling the operation of polar expeditions.

BELTA,
6.01.2017

Supply and demand

No one wants to live in a smog-filled city, but transport is essential. Clearly, we need to address the issue of harmful emissions and one answer is electric transport, following the global trend.

In 2015, there were 1.26 million electric vehicles worldwide, with China and the USA leading and Europe making its way.

The number of such vehicles is ever growing, with sales expected to comprise 30 percent of the total by 2030. Many cities are moving towards 'clean' transport, with electric taxis now the norm in Beijing, Madrid, Barcelona, Dublin, Kiev, Kharkov, Moscow and Sochi.

Internal combustion engines, burning precious hydrocarbon fuel, work at just 30-40 percent efficiency, while eco-friendly electric vehicles gain 90 percent efficiency. In December, the first Vitovt electric buses will appear in Minsk streets, assembled at Belkommunmash. Meanwhile, specialists at the Joint Institute of Machine Building, at the National Academy of Sciences of Belarus, are developing the first domestic electric car. We have the expertise necessary.

The NAS Joint Institute of Machine Building is the central figure and consolidator, bringing together experts in developing electric transport, with eco-goals. It's a global trend that Belarus is delighted to follow.

A domestically-produced electric vehicle is to be assembled using BelGee's Geely passenger car as the basis, explains Candidate of Technical Sciences Sergey Poddubko, Director General of the Joint Institute of Machine Building. He notes, "Creating a commercial electric vehicle is economical, as almost all manufacturers have discovered: Volkswagen, Citroen and Peugeot. They all produce passenger vehicles using electricity, in pure form and as hybrids [running on traditional fuels and electricity]."

BelGee is assembling vehicles at its enterprise in Borisov, and a large factory is being constructed to produce cars between Borisov and Zhodino. The Belgee Electro shares the same design but bears the logo of a green The car used as the electric taxi basis leaf. Structurally, all electric vehicles are similar, using an electric motor, a control system and a battery. However, each producer adds 'secret' expertise.

Mr. Poddubko tells us, "We've developed our own complex algorithms for the control system: multi-level, intellectual and using micro-circuit systems. We've created our own electric motor and are set on creating our own battery, too, in cooperation with the Scientific and Practical Centre for Materials Research at the National Academy of Sciences. We're using graphenes and already have a prototype battery which looks promising, demonstrating high efficiency in the lab, at a lower cost than analogues. So, the domestic electric vehicle will be purely Belarusian-made."

This is important, since the legislation of the Customs Union set conditions for industrial assembly, demanding at least 70 percent localization of components. The Belgee Electro certainly fulfils these criteria.

Our electric vehicle will be able to achieve speeds of 90 km/h, with one charge allowing 150 km driving. It's quiet, which is actually as much of a problem as an advantage, since pedestrians tend not to hear such cars approaching. Noise is being added artificially to compensate. Naturally, such cars are cheaper to run than petrol or diesel cars, and are easier to maintain. Components are hermetic, not requiring labour-intensive technical maintenance.

Nevertheless, there are two significant disadvantages hampering development worldwide: the lack of infrastructure for a network of charging stations and current high prices.

"At present, electric vehicles cost more: a commercial Belgee costs about \$13,000 while its electric variant is about \$30,000. The considerable difference is explained by the application of new technologies and materials, and the absence of mass production of components. However, their price is quickly falling. Batteries are improving, as are the engines themselves," Mr. Poddubko notes.

He believes that, when production reaches a commercial scale, the cost will become affordable, adding, "Electric transport abroad is often

manufactured to order, for example by cities wishing to reduce pollution. There are often tax preferences offered at state level for such transitions, alongside subsidies and cheaper costs for charging, to stimulate the development of this type of transport. Unfortunately, we don't have such a practice yet. I hope to see that change in the future."



Those initiating the innovation are keen to see cities support fleets of electric taxis, using domestic electric vehicles, offering preferential terms and setting up a network of charging stations.

Minsk is already taking steps, having purchased Vitovt ready for work Belkommunmash has already made two Vitovt electric bus models, for use in Minsk, with charging at final stops. They will appear in December, with twenty buses in use by late 2017. On the subject around a dozen buses running on gasmotor fuel, which release less harmful emissions. Electric cars with good characteristics are vital. Vehicles are being assembled by the end of this year, for trial in spring 2017. If everything goes according to plan, by late 2017, these will be launched to the public.

Offline

An ordinary socket can be used to charge an electric vehicle, but urban 'charging' infrastructure is essential and currently lacking in Belarus. Only a few charging stations are operational as yet: a free station in Minsk and those at fuelling stations in Oshmyany and Gomel, as well as at the 57th kilometre of M6 motorway. This makes it impractical to take a longer journey in Belarus by an electric car.

Belenergo has been studying various scenarios, since the development of electric transport would help integrate the Belarusian NPP (nuclear power plant) into our energy system. Legislation isn't imposing any restrictions, and commercial charging can be established by anyone. However, the existing tariffs for electricity and absence of preferences make it unprofitable.

Belarus Magazine,
01.01.2017

BELARUS, EGYPT TO COOPERATE IN GROUNDWATER EXTRACTION, AIR QUALITY MANAGEMENT

Belarus and Egypt will establish cooperation in groundwater extraction and air quality management, Irina Stekh-Sankevich, spokesperson for the Belarusian Ministry of Natural Resources and Environmental Protection, told BELTA.

"Minister of Natural Resources and Environmental Protection Andrei Kovkhuto is currently in Egypt on a visit as part of an official delegation headed by President Alexander Lukashenko. Two documents have already been signed, namely a memorandum of understanding and cooperation in protection and sustainable management of water resources between the Belarusian Ministry of Natural Resources and Environmental Protection and the Ministry of Water Resources and Irrigation of the Arab Republic of Egypt, and also a memorandum of understanding and cooperation in environmental protection, sustainable management of natural resources, and climate change between the relevant Belarusian ministry and the Egyptian Ministry of Environment," Irina Stekh-Sankevich said.

She explained that the documents provide for the development of the bilateral cooperation in norm- and standard-setting, metrology and standardization in environmental protection, exploration and drilling of groundwater production wells and development of the underwater management system, quality management of air, groundwater and surface water, adaptation of water resources management to climate change, effective reuse of the drainage and wastewater, and organization of

recording of water consumption and disposal.

Andrei Kovkhuto will have a bilateral meeting with the Egyptian Minister of Petroleum and Mineral Resources as part of the Belarus-Egypt business forum on 16 January.

Irina Stekh-Sankevich noted that in mid-December 2016, Minsk hosted a meeting between Belarusian Minister of Natural Resources and Environmental Protection Andrei Kovkhuto and Egyptian Water Resources and Irrigation Minister Mohammed Abdel Atty. During the meeting, the sides discussed prospects of advancing bilateral cooperation in the protection and rational use of water resources. The Egyptian side expressed interest in cooperation in a number of areas, including control over the pollution of water resources, technologies for purifying and recycling water, drainage systems, new and promising water extraction technologies, including water production from alternative sources. The Egyptian side also expressed interest in water demineralization, ways to increase production and reduce losses in the course of using water resources, purification of artesian water from iron and magnesium.

BELTA,
16.01.2017

[Cuba ready to bolster ties with Belarus in biotechnology, agriculture, industry](#)

[NASB head on cooperation with Sudan: Proposals range from geological exploration to biotechnologies](#)



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Belarus, Ukraine explore opportunities for cooperation in energy efficiency

Belarus and Ukraine are exploring opportunities for cooperation in energy efficiency. Igor Sokol, Ambassador Extraordinary and Plenipotentiary of Belarus to Ukraine, and Sergiy Savchuk, Head of the State Agency on Energy Efficiency and Energy Saving of Ukraine, discussed the prospects for collaboration in this area on 20 January, BELTA learned from the press service of the Belarusian Ministry of Foreign Affairs.

Igor Sokol, Ambassador Extraordinary and Plenipotentiary of Belarus to Ukraine, and Sergiy Savchuk, Head of the State Agency on Energy Efficiency and Energy Saving of Ukraine, discussed the prospects for collaboration in this area on 20 January, BELTA learned from the press service of the Belarusian Ministry of Foreign Affairs.



"The parties discussed the prospects for the cooperation between Belarus and Ukraine in energy efficiency, alternative energy, and the use of local fuels," the press service said.

The sides also considered the possibility of signing a cooperation roadmap for 2017-2020, organization of mutual visits, and Belarus' participation in energy efficiency programs in Ukraine.

BELTA,
21.01.2017

Belarusian electric car to be trialed by year end

There are plans to trial a Belarus-made electric car by the end of 2017, BELTA learned from Professor Alexander Kilchevsky, Chief Academic Secretary of the National Academy of Sciences of Belarus (NASB).

According to the source, one of the Belarusian institutes is working hard on the project. The Belarusian electric car will be based on a BelGee car. "We should have a prototype by autumn and get the prototype trialed in Belarus. We hope we will have results by the end of 2017," said Alexander Kilchevsky.

The exploration of new scientific prospects, including the development of Belarusian electric vehicles, will become more feasible once the Belarusian nuclear power plant is commissioned.

"It will be a momentous event for Belarus. Belarusian electric car to be presented by summer 2017"

Providing scientific support for the nuclear power plant is one of the tasks of the Academy of Sciences. Can you imagine that once the Belarusian nuclear power plant goes online, the country's supply of electricity will be increased by roughly 50%? It means we will be able to use cheaper electricity. For instance, soon we are going to start designing one of the first houses in Belarus that will rely virtually solely on electricity. On the one hand, the design will save natural gas. On the other hand, such a house will not require the construction of heating pipelines and so on," said the scientist.

BELTA,
19.01.2017

DREAM NAMED SUN

The park I visited, to the west of Soboli village (in the Bragin District), wasn't green but blue, filled with solar panels. Their photovoltaic modules are traditionally sky-blue in colour. Soboli solar park is the biggest in Belarus and within postSoviet territory, covering over forty hectares. Some view it as an eyesore. Others believe it's a sign of the future.

My enthusiasm for making a detailed study of the entire territory of the Solar-II photovoltaic station rapidly subsides: it's a challenge to walk the 3.5km perimeter in frost. "Our colleagues responsible for monitoring take a snowmobile," admits the chief engineer of Solar Invest Ltd., Sergey Sviridov. "Let's walk as far as you can, so you can see the project's great scale."

We fail to see a single employee in the 'forest' of panels. There's no need for constant human presence, as the solar park can operate autonomously. Buildings are there simply as technical premises, monitoring via computer. "It's possible to register faults remotely: from Bragin or even Minsk. If necessary, a specialist can be sent immediately. However, we're yet to experience a problem," explains Mr. Sviridov. Interestingly, Gomel solar energy travels as far as Minsk. Its Solar-II panels hourly generate 18.5 MW of direct current, which is immediately transformed into alternate current, with the help of 615 inverters — to join the national network, powering cities. The station launched in July 2016, and has already provided an impressive volume of energy. The panels should last up to 35 years, with minimal wear and tear.

On cloudy and rainy days, the 'energy harvest' can drop by up to 80 percent, supplying just 20 percent to the network, but this is rare. Snowfall can also hamper solar charging, with workers then hired to brush away the layer of powder, explains Mr. Sviridov. The Bragin District enjoys the most sunshine countrywide. "We were pleasantly surprised to learn that Bragin enjoys more

sunshine than other cities in the Gomel Region," says the Deputy Chairman of the Bragin District Executive Committee, Piotr Romanyuk. "Gomel has 23 minutes less daily sunshine than Bragin, while Khoiniki (situated just 25km from Bragin) has 10 minutes less."

Naturally, the project required serious investment (the solar park was built using foreign funds), and makes good use of land registered as contaminated (being withdrawn from agricultural use). "Soboli was resettled but, in 1987, was evacuated; mostly, elderly people returned, although the village thrived in the past. The investment project has made it possible to put the land to good use," Mr. Romanyuk asserts.

There's no doubt that Solar-II has breathed new life into these lands and its location bothers no one (unlike similar facilities abroad). In fact, it draws people, who view it as a spectacle. Wind turbines are seen as commonplace, while solar facilities remain a novelty in Belarus. Interestingly, Bragin could become the capital of solar energy, as another solar plant (of 4.5MW capacity) operates nearby. Mr. Romanyuk comments, "Applications have been received to build other solar power plants in our region, including a 13MW station, covering thirteen hectares."

Bragin's district heads would love to secure free solar energy for the area. After all, Solar-II could generate more energy, taking into account local needs. However, this is in theory. In practice, the idea is hampered by quotas set for the station. There are no quotas set for enterprises regarding domestic energy needs. Meanwhile, in this case, we refer to the whole district rather than a separate enterprise. Actually, we never know whether the rules will be reconsidered and residents of Belarus' southern region (mostly affected by the Chernobyl catastrophe) would enjoy the saving sun.

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