

Belarusian Nuclear Insurance Pool

Belarusian NPP





Belarusian Nuclear Insurance Pool was established on 27th February, 2019 under the contract on Belarusian Nuclear Insurance Pool.

It includes three Belarusian insurance companies:

- Belarusian Republican Unitary Insurance Enterprise “Belgosstrakh”,
- Export-import insurance company of the Republic of Belarus,
- Republican Unitary Enterprise “Belarusian National Reinsurance Organization”.



Belarusian Republican Unitary Insurance Company

“Belgosstrakh”



Belgosstrakh is the leading insurance company of the Republic of Belarus. The company was founded on 3 December 1921. The founder is the Council of Ministers of Belarus.

The main strategic goal of Belgosstrakh is to create an effective system of insurance protection of the individuals and legal entities property interests.

Belgosstrakh is widely represented in each region of Belarus, consisting of:

- 8 branches;
- 117 representative offices.

The share of Belgosstrakh in the aggregate insurance premium collected by Belarusian insurance market is 47%.

Conclusion and execution of insurance contracts on behalf of Pool makes Leading Insurer - “Belgosstrakh” (Leading Insurer).





Export-import insurance company of the Republic of Belarus



БЕЛЭКСИМГАРАНТ
EXIMGARANT OF BELARUS

2001 — the establishment of Export-import insurance company of the Republic of Belarus specializing in export and import insurance. The Founder is the Council of Ministers of the Republic of Belarus.

2002 - EXIMGARANT OF BELARUS acquires full membership rights in the Prague Club of the Berne Union.

The company's strategy is aimed at the development and strengthening of the export potential of the republic of Belarus due to the efficiency of the national system of export promotion.





RUE “Belarusian National Reinsurance Organization”

Belarus Re is the only reinsurance-specialized company in Belarus being a 100% state-owned company which was established on 4 November 2006 by virtue of Decree No. 1463 issued by Council of Ministers of Belarus.

Belarus Re was incorporated to create an international reinsurance company, offering a full range of reinsurance services and providing clients with comprehensive high-standard protection.

Belarus Re is authorized to insure civil liability for nuclear damage caused during the use of atomic power as per 28 February 2019 and voluntary package insurance of risks occurred during Belarusian NPP operation as per 02 April 2019 on the voluntary basis under amendments to the special permit (license) No. 02200/13-00048.

Placement of risks in reinsurance on behalf of Belarusian Nuclear Insurance Pool provides Belarus Re (Leading Reinsured).

Reinsurance of risks, ceded from nuclear pools of foreign states on behalf of Belarusian Nuclear Insurance Pool provides Belarus Re (Leading Reinsurer).



Legislation of the Republic of Belarus in the field of atomic energy



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- ❖ Vienna Convention on Civil Liability for Nuclear Damage as of May 21, 1963 (with Protocol as of September 12, 1997);
- ❖ The Constitution of the Republic of Belarus;
- ❖ Civil Code of the Republic of Belarus;
- ❖ Law No. 426-3 of the Republic of Belarus as of July 30, 2008 “On the Use of Nuclear Energy”;
- ❖ Decree of the President of the Republic of Belarus No. 124 as of March 29, 2011 “On measures aimed at execution of international contracts in the field of civil liability for nuclear damage”;
- ❖ Decree of the President of the Republic of Belarus No. 65 as of February 22, 2011 “On some issues of construction financing of engineering and transport infrastructure for residential areas and infrastructure of nuclear power plant in the Republic of Belarus”;
- ❖ Decree of the President of the Republic of Belarus No. 565 as of November 12, 2007 “On some measures aimed at construction of nuclear power plant”;
- ❖ Decree of the President of the Republic of Belarus No. 499 as of November 02, 2013 “Concerning the construction of the Belarusian nuclear power plant”
- ❖ “Development strategy of energy resources of the Republic of Belarus for 2010 – 2020”, approved by Resolution No. 1088 as of August 09, 2010 of the Council of Ministers of the Republic of Belarus
- ❖ Decree of the President of the Republic of Belarus No. 15 as of 14 January 2019 “On liability for nuclear damage”

Insurance of Belarusian NPP Construction



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Construction & Erection Works at Belarusian NPP are covered under CAR&TPL policy

The insurance cover is effective during the entire Construction & Erection Works Period:

- For Unit 1: coverage till 15th of December 2019 (commissioning) (extension planned till 16.08.2020);
- For Unit 2: coverage till 19th of July 2020 (commissioning) (extension planned till 26.06.2021)

Sum Insured: 8 975 514 401 USD

Placing Broker: MARSH

Leader: Munich Re



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Key milestones of the Belarusian NPP construction



2007	<p>Adoption of the Energy Security Concept of the Republic of Belarus, providing the inclusion of nuclear fuel on the energy balance of the republic and the construction of a nuclear power plant (September).</p> <p>Decree of the President of the Republic of Belarus “On Some Measures for the Construction of a Nuclear Power Plant“(November).</p>
2008	<p>The Law of the Republic of Belarus “On the use of nuclear energy”(July)</p> <p>Act of the State Commission on the selection of the location for the Belarusian nuclear power plant (December).</p>
2009	<p>Selection of the NPP design type (April).</p> <p>The cooperation agreement on peaceful use of nuclear energy between Government of the Republic of Belarus and Government of Russian Federation was signed (May).</p>
2010	<p>Public hearings over the Environmental Impact Assessment Report in Transboundary context were held</p>
2011	<p>The intergovernmental agreement on cooperation in the construction of NPP on the territory of the Republic of Belarus was signed (March).</p> <p>The Decree of the President of the Republic of Belarus “On the placement and design of the nuclear power plant in the Republic of Belarus” was signed (September).</p> <p>The intergovernmental agreement on the export loan to the Government of the Republic of Belarus for the construction of NPP was signed.</p>

Key milestones of the Belarusian NPP construction



2012	<p>The General contract on the NPP construction was signed.(July).</p> <p>The license for building nuclear facilities №1, №2 was issued (May).</p>
2013	<p>Development of the NPP project.</p> <p>Project documentation approval by the Government of the Republic of Belarus (September).</p> <p>The license for complete construction of the unit №1 was obtained (September).</p> <p>The Decree of the President of the Republic of Belarus “On the construction of the Belarusian nuclear power plant ” was signed (November).</p> <p>«First concrete», Concreting of the foundation plate power-generating Unit №1 (November).</p>
2014	<p>The license for complete construction of the unit №2 was obtained (February).</p> <p>Installation fuel melt trap power Unit №1(November).</p>
2015	<p>Installation of fuel melt trap unit №2 (August).</p> <p>Commissioning of the fire station (December).</p>
2019	<p>Nuclear fuel supply (November) - planned</p>
2020	<p>Physical start-up unit №1</p>
2021	<p>Physical start-up unit №2</p>



The process of selecting a suitable site for NPP

- The process of selecting a suitable site was carried out in a comparative analysis of numerous characteristics of competitive sites.
- As a result, three sites were selected to place NPP.



Site	Complicate factors
Krasnopolyanskaya site	<ul style="list-style-type: none">▪ Possibility of intensifying karst processes
Kukshinovskaya site	<ul style="list-style-type: none">▪ Possibility of intensifying karst processes;▪ Use of deep dewatering during construction
Ostrovets site	<ul style="list-style-type: none">▪ unfavorable factors have not been identified -▪ (Ground without breaking, high strength soils, low groundwater - 20 meters)

The State Commission in December 2008 identified Ostrovets as a priority, as this area has the best geological properties, has no unfavorable characteristics and meets the requirements of the NPP; Krasnopolyanskaya and Kukshinovskaya site - backup.

NPP site

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Ostrovets site

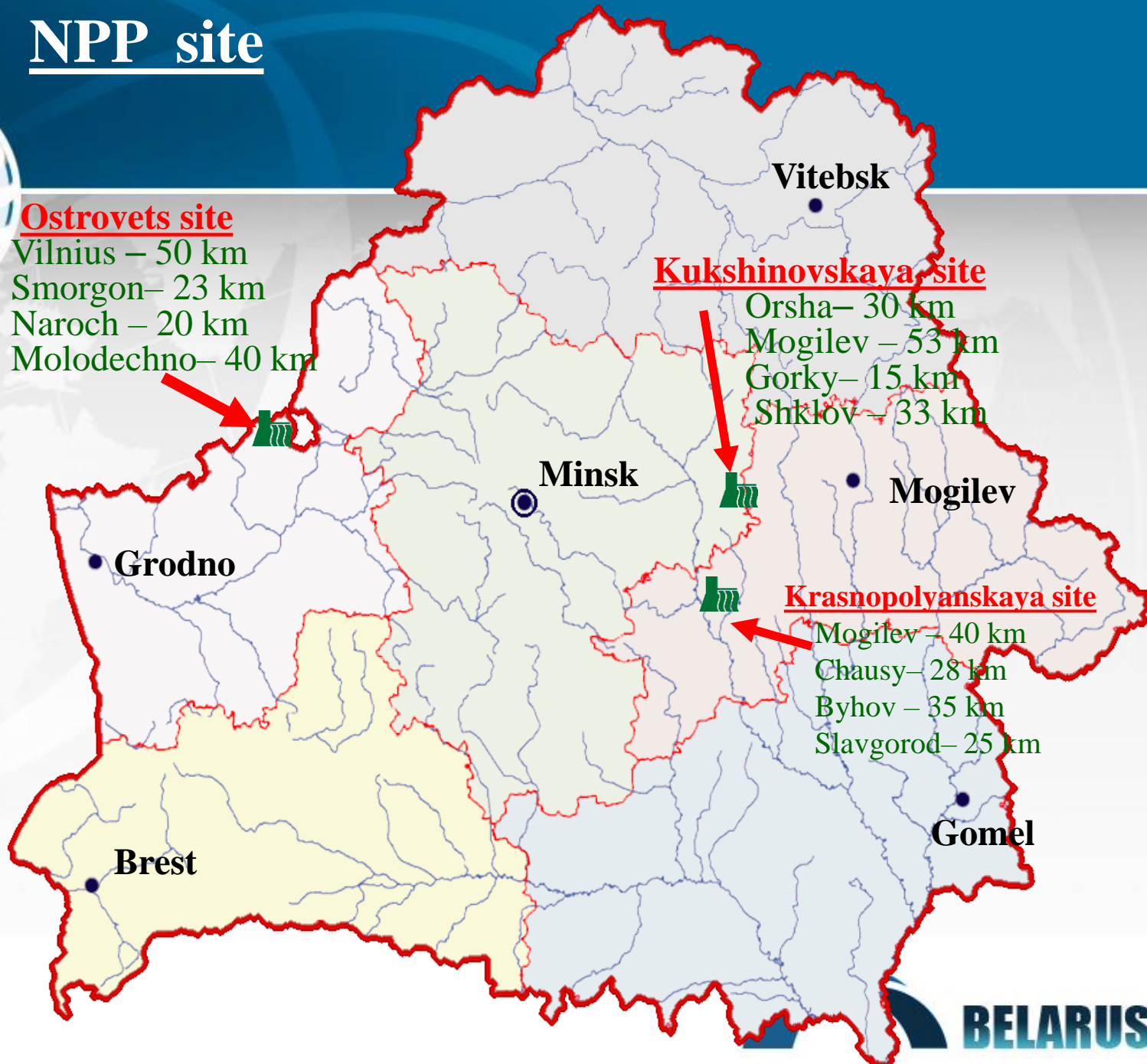
Vilnius – 50 km
Smorgon – 23 km
Naroch – 20 km
Molodechno – 40 km

Kukshinovskaya site

Orsha – 30 km
Mogilev – 53 km
Gorky – 15 km
Shklov – 33 km

Krasnopolyanskaya site

Mogilev – 40 km
Chausy – 28 km
Byhov – 35 km
Slavgorod – 25 km



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Design selection

Applicants:

- **US-Japanese company «Westinghouse-Toshiba»;**
- **Russian JSC "Atomstroyexport";**
- **French-German group AREVA.**

As a result of a comprehensive review of nuclear projects proposed by these leading companies on the world market of nuclear technologies for implementation in the Republic of Belarus selected Russian project "NPP - 2006" new generation "three plus". The project complies with the most strongest standards and IAEA recommendations and have increased safety features. For a number of indicators, namely the presence of active and passive safety systems, the project exceeds foreign analogues.

And what is very important, this project has a reference, i.e, a positive experience of operating nuclear power plants built on it.

Design selection



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Features of the project "NPP-2006"

Construction of nuclear power under the Russian project "NPP-2006" joint-stock company "St. Petersburg Research and Design Institute for Energy Technologies" ATOMPROEKT "provides:

- The creation of the latest generation of nuclear power plants 3+ new reactor facility with additional safety features:
 - passive heat removal system;
 - system reset and cleaning medium from the shell;
 - double protective containment;
 - fuel melt trap during beyond design basis accident.
- The maximum defense in depth principle (creating barriers to system):
 - fuel matrix fuel cladding;
 - the boundary of the reactor coolant circuit;
 - tight enclosure localizing safety systems.

The project is fully in line with international norms and IAEA recommendations.

In 2007, the Russian project (prototype design NPP-2006) were built and put into operation 2 unit at Tianwan NPP in China. Units operate reliably provide all the parameters specified for the project, for their work no comments.

Referent of the Belarusian nuclear power plant unit is currently under construction at Leningrad NPP.



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The main technical and economic indicators of the Belarusian NPP



1. Number of units, pcs.	2
2. Thermal power of the reactor	3200 MW
3. Capacity of power units (electric capacity)	2x1200 MW
4. Primary circuit pressure	162 kgf / cm²
5. Temperature at the reactor core outlet	330 °C
6. Secondary circuit pressure	70 kgf / cm²
7. Fuel cycle	4-5 years
8. Periodicity of fuel overload cycle	12 month
9. Number of fuel assemblies in the core	163
10. Service life of irreplaceable equipment	60 years
11. Coefficient of set power use	0,92
12. Coefficient of efficiency	33.7%



Protection of nuclear power plants against external influences

Hurricanes and tornadoes

the estimated maximum wind speed repeated 1 time in 10,000 years - 56 m / s



Plane crash

weight 20 tons., and a speed of 200 m / s

Blast wave

with the pressure in the front 20 kPa



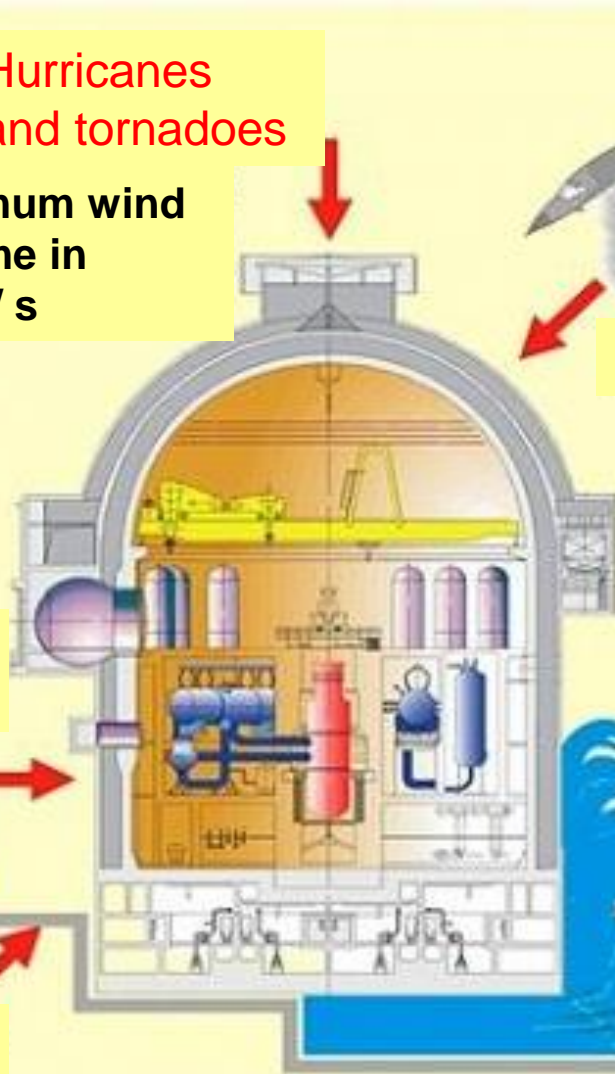
Floods

the level of provision from more than 0.01%



Seismic effects

8 points on the MSK





In accordance with Decree of the President of the Republic of Belarus No. 15 as of 14 January 2019 “On liability for nuclear damage”:

- limit of liability of the Belarusian NPP for nuclear damage in the course of activities related to the use of atomic energy is 150 million XDR each and every nuclear incident.
- in case of this amount is not sufficient to pay compensation for claims against the Belarusian NPP, the Republic of Belarus shall provide for the payment of these compensations in excess of the specified amount, but not more than 150 million XDR each and every nuclear incident.

Third Party Liability Insurance for Nuclear Perils



Third Party Liability Insurance Policy (TPL Policy) should be issued before nuclear fuel crossing the board of the Republic of Belarus. TPL Policy comes into force from the day of nuclear fuel crossing the board of the Republic of Belarus.

According to plan, nuclear fuel supply to Belarusian NPP should be carried out in November 2019. TPL Policy was issued on 29th August, 2019.

Third Party Liability Insurance for Nuclear Perils



Main terms of 1-year TPL Insurance Policy:

- Class of business: third party liability for nuclear damage due to activities related to the use of atomic energy and third party liability due to nuclear fuel transportation.
- Limit of liability: 150 million XDR. Responsibility is shared among participants of Belarusian Nuclear Insurance Pool in equal shares.
- Insurance Period: 1 year, comes into force from the day of nuclear fuel crossing the board of the Republic of Belarus.
- Limitation period in accordance with Vienna Convention on Civil Liability for Nuclear Damage as of May 21, 1963 (with Protocol as of September 12, 1997):
 - in respect of death and personal injury - 30 years from the date of the nuclear incident;
 - in respect of other damage - 10 years from the date of the nuclear incident.

Reinsurance terms:

- Net-retention of Belarusian Nuclear Insurance Pool: 30 million XDR (20% of 100%);
- The Reinsuring Pool: Russian Nuclear Insurance Pool, share – 120 million XDR (80% of 100%)





Thank you!