

Green Building Market in Russia

Russia is catching up quickly with the mature green building markets. The number of buildings certified to LEED and BREEAM is growing weekly. National Green Building Standards have been developed and are coming into force. DGNB, the German standard is also known on the market. A Localised Passive House Standard is being implemented.



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Russian National Green Building Standards

GOST R 54964–2012 «Environmental requirements for real estate» is a conformity assessment method, environmental requirements to a property. It was approved in 2012 as a voluntary state standard. It is based on the Russian building regulations (GOST and SNiP) with a strong influence by the BREEAM and LEED benchmarking tools.

The standard **STO NOSTROY 2.35.4 2011** «Green building. Buildings and civil construction. Rating system for evaluation sustainability of residential and public buildings» complies with international ISO standards, taking into account the national construction and sanitary norms, regulations and guidance documents. The standard is influenced by LEED, BREEAM, DGNB and HQE (France). It defines the principles, categories, evaluation criteria, sustainability indicators of habitat, as well as weighting for ratings for buildings; provide a framework of basic indicators, which, when necessary are corrected or supplemented by coefficient parameters to reflect regional or local climate, energy, economic, social and even bespoke features; establishes classes of sustainability for the built environment, including renovated residential and public buildings, for both the building and project documentation. The benchmarking system for «sustainable habitat» includes basic values of the criteria and their equivalents, roughly corresponding to the conditions of the Moscow region. As Russian regions significantly differ by climate, resources (water and energy) and the potential for generating renewable power, there is an obvious need for a regional perspective in

any rating tool. For such a regional perspective, categories and criteria of «sustainable habitat» are dealt with in the **STO NOSTROY 2.35.69–2012** «Green building. Buildings and civil construction. Consideration of regional characteristics in the rating estimation of sustainability in building construction».

The documents are jointly developed by «ABOK» (Association of Engineers for Heating Ventilation and Air Conditioning), «Centre for Environmental Certifications – green standards» (supported by the Ministry of Nature Resource of Russia), «National Association of Builders – NOSTROY and TERMEK.

BREEAM in Russia

BREEAM in the most commonly used rating system in Russia. More than 10 buildings are certified including a business centre Ducat Place III in Moscow – the first commercial real estate in Russia-certified by BREEAM. The building was awarded with a «Very Good» level by BREEAM Europe Offices scheme. Due to environmental initiatives energy consumption of the building has decreased by almost 35 % in 2010 compared with 2008, with savings for tenants to more than 188,000 USD a year.

12 Olympic facilities of various types (indoor and outdoor sports arenas, cottage village, university, office buildings, hotels and spa resorts as well as a railway station) in Sochi are being certified on individual criteria, developed in accordance with the logic BREEAM Bespoke International 2008–2011 standards.

An important result of certification of the Olympic facilities will be the development and approval of the so-called «checklist A10» – incorporation of European regulations used in the BREEAM system and Russian building regulations. When the developed checklist A10 system is approved by BRE Global (BREEAM operator), a number of Russian norms are deemed admissible as evidence for the BREEAM certification which will simplify the certification process.

Other green buildings in Russia

In addition to the buildings that are certified by green standards there are a number of objectively green and innovative buildings that deserve special attention and recognition because they demonstrate innovation in terms of ecology, economy, energy and resource efficiency as well as other aspects of the green construction.

More information at zvt.abok.ru



«Bolshoy» (Big) Ice Palace in Sochi



The «Adler» passenger railway station in Sochi



Passive house in South Butovo



Business centre «Japan House»
(first building in Russia by BREEAM In-Use).

Innovative modern technology in Sochi

As part of the certification process in Sochi there are some innovative technologies and solutions applied – important for Russia's green building industry development:

- The broad and extensive use of photovoltaic cells (PV panels) to generate electricity.
- The broad and extensive use of solar hot water systems (SHW).
- The use of high quality energy-efficient materials in construction (fit-out, glass and external surfaces).
- The use of high-quality and efficient engineering equipment for buildings.
- Implementing of innovative construction technologies that save time, money and reduce the overall impact on the environment.
- The conservation and restoration of biodiversity in areas of construction.
- The creation of bicycle parking, paths and infrastructure.
- Charging stands for electric vehicles (EV) some from renewable energy sources.
- The partial use of both vertical and horizontal landscaping on buildings (green roofs and walls).
- The widespread use of LED lighting.
- Energy modelling at project design stage to calculate efficiency of design and to help finding optimal solutions and implementation methods.
- The use of FSC-certified wood. ■