



GREEN BUILDINGS MARKET INTELLIGENCE

RUSSIAN FEDERATION COUNTRY PROFILE



Creating Markets, Creating Opportunities

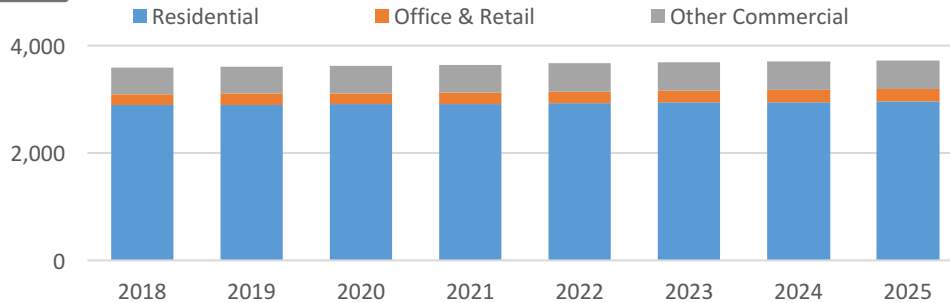
RUSSIAN FEDERATION: COUNTRY SUMMARY



MARKET GROWTH



Building Stock (million m2)



Market through 2025

Total market

Green market

Commercial

USD 65B

USD 5B

Residential

USD 62B

USD 4B

Residential units

570,000

20,000

OTHER FACTORS



- Obsolescence is a factor the country is dealing with, which will continue to lead to more construction in coming years. This is not captured in the chart showing the overall growth of the building stock.

GREEN BUILDING PROGRAMS



- The Green Building Council in Russia is helping the country meet energy standards.
- 135 green projects are certified or registered.
- Russia signed a new partnership United Nations Development program, originally aimed to assist the country in investing abroad.
 - There have been 20 new projects with \$45M co-financed between the two parties within Russia.

CLIMATE POLICIES (NDCS)



- Although Russia has pledged to reduce their emissions by 15-25% by 2020, the country has not yet ratified the Paris Agreement.
- The Federal Law on Energy Efficiency was passed in 2009 to set guidelines for energy consumption.

MARKET STATUS

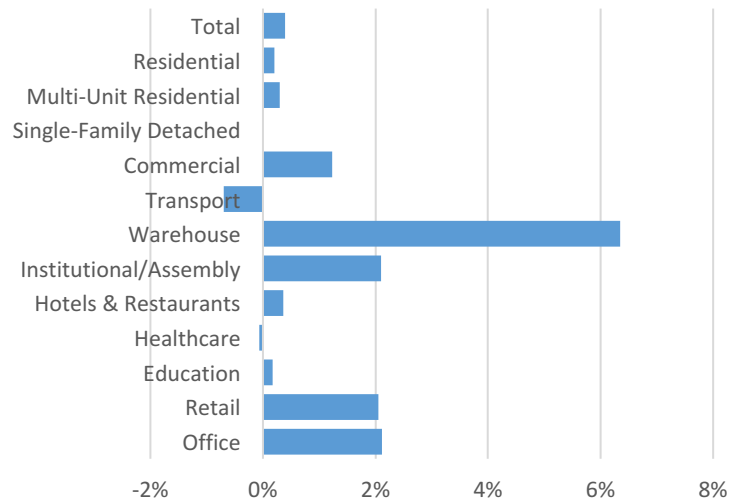


- Construction is currently the 7th largest aspect of the country's economy.
- The government has added over 200 standards to become more similar to those of the EU.
- 2015 saw the largest amount of residential real estate built ever.
- There are plans for new hotels to be constructed in the next 5 years.



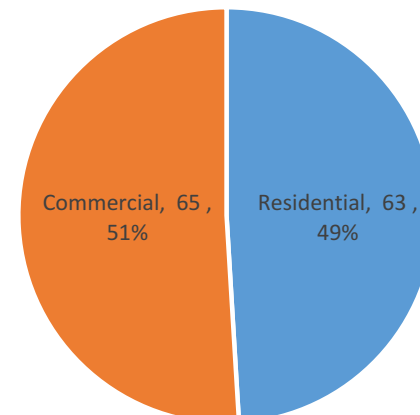
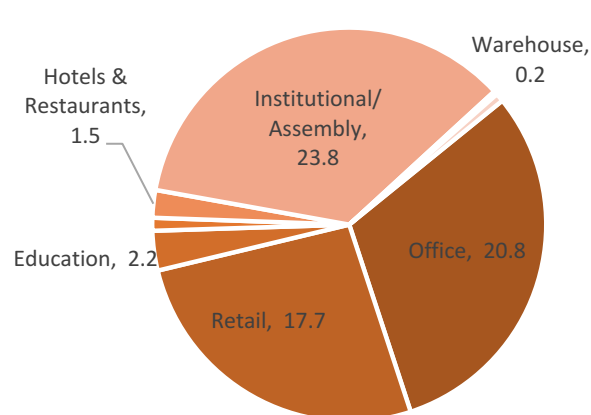
WAREHOUSING LEADS NEW BUILDING GROWTH, WHILE REFURBISHMENTS ARE NEEDED FOR OTHER SECTORS

MARKET GROWTH BY SUB-SECTOR (CAGR)



- Russia has already seen incredible growth ahead of the Winter Olympics and the World Cup that is set to take place next year.
- In the following years we expect the country to focus on infrastructure projects such as warehouse and institutional buildings.
- Residential opportunities will come from efforts to modernize outdated Soviet Era housing, especially for multi-unit structures.

TOTAL MARKET SIZE 2018-25 (USD BILLIONS)

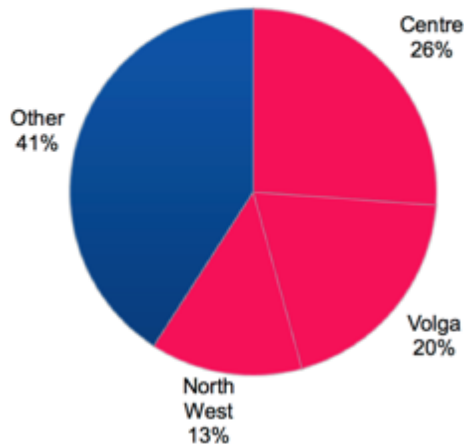




EXPANSION OUTSIDE OF THE TIER 1 CITIES AND IN **SPECIAL ECONOMIC ZONES**

- Although 2015 saw the number of mortgages decrease, 2017 has already been a strong year in increasing the volume of mortgages.
- With more homes becoming increasingly less livable due to little to no maintenance of Soviet era housing, there has already been an increase to the number of new apartments in Moscow and the surrounding areas.

Construction expenditure by Federal District, %



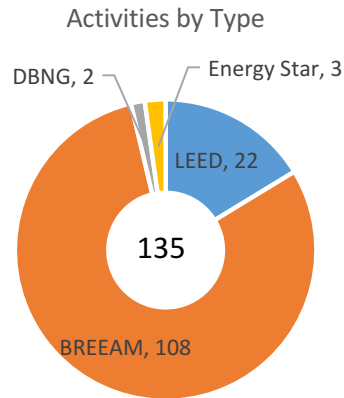
- Although there are less opportunities in the nation's center for new apartment construction, there is still a great need across the massive country.
- Outside of the capital, there are many Special Economic Zones and Industrial areas that are in need of new construction for modernization for housing and transportation hubs such as airports and train stations.

Russia will continue to see growth in construction throughout the next decade



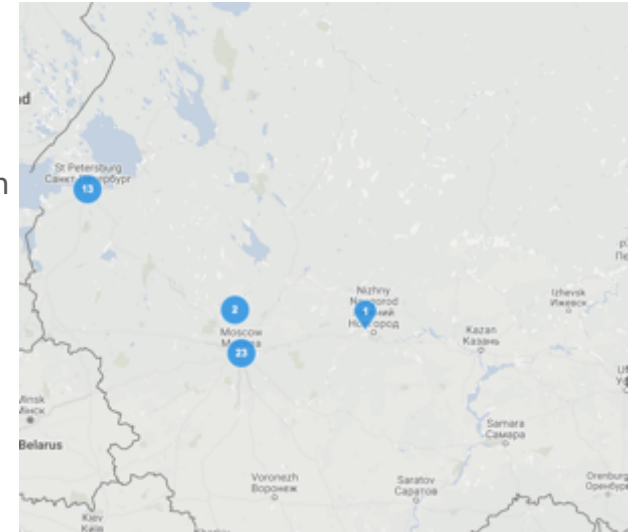
RUSSIA HAS A **GROWING** GREEN BUILDINGS MARKET

In 2017, Russia counted 135 published green building activities, including certifications and registrations.

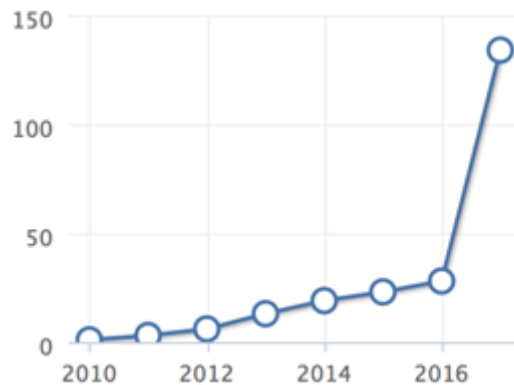


Certified and registered buildings are located throughout Russia, however they are densely populated in the capital city of Moscow

The next decade will likely see this spread out throughout the other federal districts



Cumulative activity count, by year:



Notable projects include:

- WILO RUS Industrial Complex
- Renaissance Plaza A
- Septem City/ Okhta Mall
- Bullbridge Zhukovsky Shopping Mall
- Saint-Gobain Weber Research Center
- JTI Mercury Tower in Moscow City
- MARS production plant, M&M's
- FORT ROSS
- TMH Research and Development Centre
- Pearl Plaza Shopping Center



GREEN IS **EXPECTED TO GROW**, ESPECIALLY THROUGH REFURBISHMENTS

PROJECTIONS

- Green build is concentrated in office, retail, and multi-family residences, since there are initiatives in these fields.

STIMULATING FURTHER GROWTH

- An easy-to-use residential tool such as EDGE, especially its refurbishment tool, could further stimulate green buildings in Russia.
- Given the proportion of the residential market to the overall market, further green penetration into residential will have a large impact on the overall penetration of green.



POSITIVE POLICY SHIFTS SIGNAL MARKET SUSTAINABILITY

- With assistance from multiple international organizations, Russia has passed legislation dedicated to the purpose of retrofitting older buildings to improve their energy efficiency.



- *“The need for modernization is enormous: some 58–60 percent of the country’s total multi-family apartment buildings are in need of extensive capital repair, rising to 93–95 percent in those apartment blocks with an average age of not less than 25 years” (IFC/EBRD 2012).*

- 2009 Federal Law on Energy Efficiency.
- Set targets for updating building codes every five years.
- Also set target of reducing energy consumption in public buildings by 3% annually.
- Includes measures for both retrofits and newer buildings.
- The country saw energy consumption decrease by nearly 7% between 2008 and 2011, signaling the effect that the new law is having, and demonstrating the growth of the green building market in the country.
- Currently 96 residential buildings meet the new requirements.





LEARN MORE ABOUT EDGE CERTIFIED PROJECTS IN EUROPE

The EDGE website provides a wealth of resources for developers and investors interested in learning more about the EDGE planning and certification process and calculating the approximate energy and water savings that can be obtained as a result of green construction.

EDGE has also documented construction projects from around the world in a series of case studies. The Kaufland project in Bulgaria is Europe's first case study:



KAUFLAND

Plovdiv, Bulgaria

Building Category: Retail

Predicted Savings of EDGE Certification:



37% Energy Savings



53% Water Savings



30% Less Embodied Energy in Materials

To access this case studies and others, visit <https://www.edgebuildings.com/projects/>



PROJECTS CAN CHOOSE BETWEEN TWO EDGE CERTIFIERS FOR **FAST, EASY, AND AFFORDABLE** CERTIFICATION



CERTIFICATION	PRICE (PER M ² , EXCLUDING PARKING)	MINIMUM
0-25,000 FLOOR AREA (SQM)	\$0.27	\$2,250
25,000-50,000 FLOOR AREA (SQM)	\$0.22	\$6,750
50,000-75,000 FLOOR AREA (SQM)	\$0.17	\$11,000

*Price per m²; Project appoints an auditor



PROJECT TYPE	CERTIFICATION	DESIGN AUDIT	FINAL AUDIT	TOTAL
Residential (one unit type)	\$1,500	\$3,650	\$4,320	\$9,470
<i>Residential (per additional unit type)</i>	<i>\$490</i>	<i>\$890</i>	<i>\$460</i>	
Commercial (single end use)	\$1,550	\$4,005	\$4,710	\$10,265
<i>Mixed-Use Buildings (per additional end use)</i>	<i>\$990</i>	<i>\$2,670</i>	<i>\$1,560</i>	

*Price per type of project; Auditor fee is included

Details and registration forms can be found on the EDGE program website:
<https://www.edgebuildings.com/certify/other-countries/>



RESEARCH METHODOLOGY

COUNTRY LIST

- IFC chose countries that correspond to the [Climate Investment Opportunity Report](#) (CIO Report) as well as countries of strategic interest for IFC.
- IFC plans to release additional country analysis, pending resources.

TOTAL MARKET OVERVIEW

- Building stock was sourced from the [Global Building Stock Database](#) and confirmed by country experts, if possible.
- The research team found local prices for capital construction expenses, or used global proxies otherwise.
- Market sizing was executed for new construction and did not focus on retrofits.

SNAPSHOT OF THE CURRENT GREEN MARKET

- Main source of information was the [Green Building Information Gateway](#), confirmed by local green building council reports, if such existed.
- The research team focused on properties certified as green.

GOVERNMENT POLICIES

- Main information was sourced from the [World Bank NDC Database](#).
- Additional information was found using various searches as well as government websites.

PROJECTIONS FOR GREEN PENETRATION

- Based on the total market growth, snapshot of the current green market, and the enabling environment of government policies, the research team projected green penetration per each of the sub-sectors.
- Weighted average of combined sector data produced the final penetration number.
- The analysis focused only on new construction, and focused only on certified properties.
- As tools for retrofits take off in the market (including IFC's EDGE product), analysis may be amended to include the retrofit market.
- Market potential may be different from numbers reported in the CIO Report, as a more conservative estimate was used for business planning purposes.

OTHER

- Information for green building councils was sourced from [World GBC website](#).
- Case studies were presented only for IFC's EDGE green building software and certification system.
- However, lists of all green certified projects in a given country can be found through the [Green Building Information Gateway](#).
- Finally, pricing for EDGE certification was included to illustrate that green certification is affordable and achievable in emerging markets.



ACKNOWLEDGEMENTS

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