



GREEN BUILDINGS MARKET INTELLIGENCE SOUTH AFRICA COUNTRY PROFILE

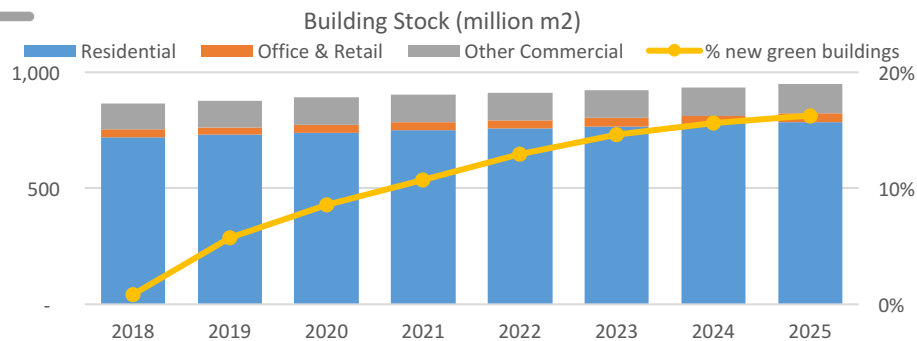


Creating Markets, Creating Opportunities



SOUTH AFRICA: COUNTRY SUMMARY

MARKET GROWTH



Market through 2020	Total market	Green market
Commercial	USD 12.44 B	USD 1 B
Residential	USD 75.72 B	USD 8.83 B
Residential units	920,000	120,000



OTHER FACTORS

- Declining GDP growth, weakening overall demand, high inequality.
- Water and Energy Crisis.
- Slow delivering of economic and social services to townships and rural areas.



GREEN BUILDING PROGRAMS

- Green Building Council SA provides advocacy and awareness and implements GreenStar and EDGE ratings.
- EDGE Program was launched in 2015.
- GBCSA has had very successful penetration into commercial sector with Green Star; EDGE is answering residential needs.
- Awareness campaigns are being launched to consumers and businesses (developers and financial institutions).
- Most developers expect to be building green in the near future.
- 20 EDGE Experts trained.



CLIMATE POLICIES (NDCS)

- Target: 398 MtCO2e reduction by 2025. Increase in renewables and carbon tax planned.
- National Standard (SANS) 10400-XA 204 encourage energy efficiency in buildings.



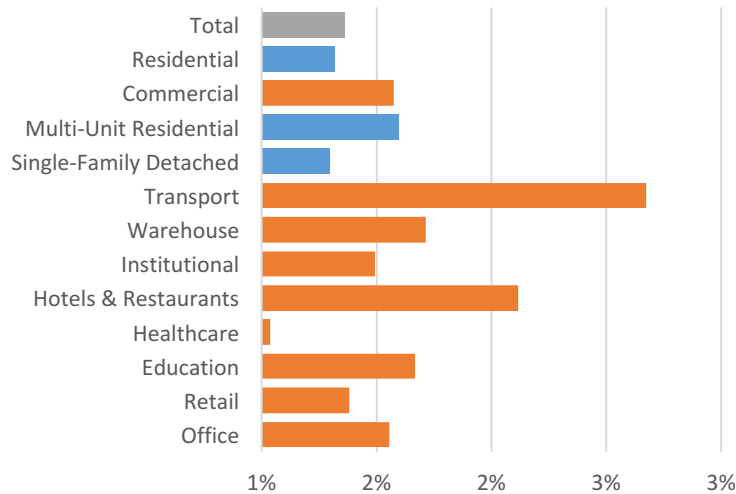
MARKET STATUS

- Sophisticated market with many developers and 4 key financial institutions.
- In homes, about 120,000 homes come into the market every year, but housing shortage is still vast.
- High penetration of green in the commercial sector, particularly in offices, with other sectors still catching up.



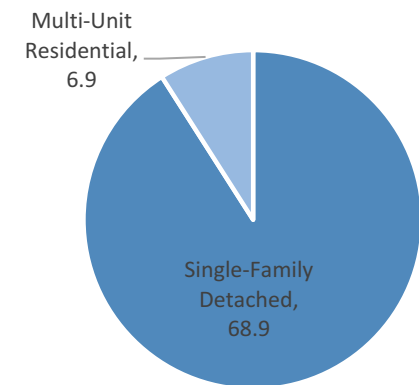
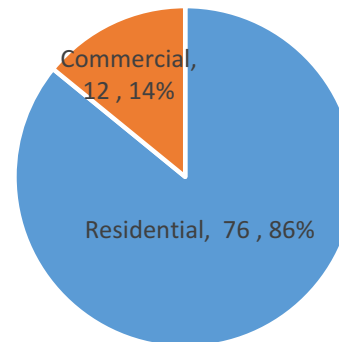
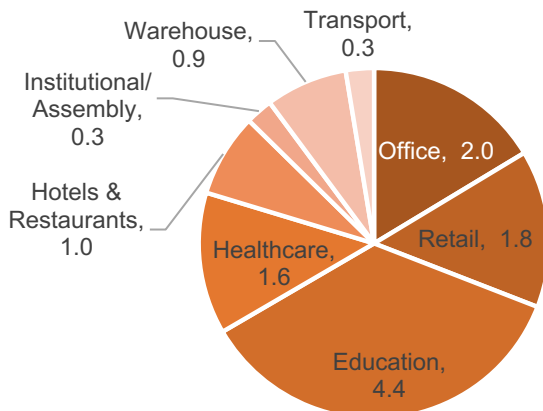
MARKET MAY BE SLOWING DOWN DUE TO ECONOMIC DOWNTURN BUT HIGH HOUSING NEEDS REMAIN

MARKET GROWTH BY SUB-SECTOR (CAGR)



- Market data for South Africa was developed before the country's debt downgrade, which is expected to result in economic downturn.
- Growth projections will likely need to be revised.
- Housing market continues to be strong, as huge housing shortage remains – residential is 86% of market projection.
- However, developers may turn to rental stock instead of sale to owners.
- Preference for single-family homes leads to high weighted average for this sector – changes in urban zoning may change proportions.

TOTAL MARKET SIZE 2018-25 (USD BILLIONS)





MATURE GREEN COMMERCIAL MARKET, BREAKING INTO RESIDENTIAL

- GBCSA is tracking almost 250 certified projects using Green Star SA and EDGE systems.
- High penetration particularly in the office sub-sector.
- Need for resource efficiency due to country's energy and water crisis will continue to provide the business case for green buildings.



Projects are spread throughout the country though Johannesburg metro area leads.





S. AFRICA IS A LEADER IN GREEN INVESTMENTS

INVESTMENT FUNDS:

- South Africa's State-owned Industrial Development Corporation (IDC) plans to inject \$1.2 billion into 'green' industries over the next five years.
- EUR 120 mn credit facility made available to ABSA, IDC and Nedbank, to finance renewable energy and energy efficiency projects.
- R300 mn green fund launched by Business Partners Limited.
- South Africa National Housing Finance Corporation has committed \$30 million and the Eskom Pension Fund \$10 million.

HISTORY OF SUCCESS:

- The private equity investor's first fund, the SA Workforce Housing Fund, has enabled the development of more than 28,000 housing units with a combined value of more than ZAR 8.6 billion.

UTILITY AND MATERIALS INVESTMENT:

- Natural Heating and Cooling; Natural Lighting (design of buildings to make optimal use of day-lighting) and Energy-Saving Lighting technologies.
- Energy Generation: photovoltaics, wind turbines, solar hot water heaters, flat panel collectors, evacuated tubes.
- Heating, Ventilation and Cooling, Greenwalls, Glazing and Windows, Solar Shading, Greenroofs/Cool Roofs, Permeable Paving, Water-Efficient technologies, Structural Insulated Panels and Formaldehyde-free board.

IFC AND EDGE INVESTMENT:

- IFC invested \$20 million + \$10 million for International Housing Solutions IHS Fund II, drawing from Global Environment Facility (GEF) funding to support the development of affordable green housing in South Africa.



GREEN PROJECTS ARE RETURNING THEIR INVESTMENT

- For the year ending December 2015, properties with top-quartile energy efficiency delivered a total return of **12.5%**.
- This outperform was driven by superior capital growth (+60bps) and income return (+70bps).
- This reflects the continued trend that underlies **the long term financial performance of sustainable buildings.**

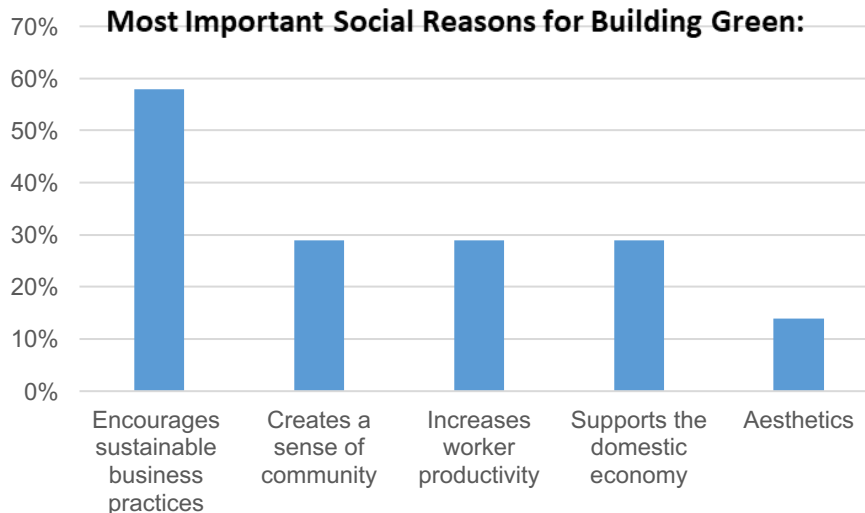
Expected Business Benefits of Green Building in South Africa

	New Green Building		Green Retrofit	
	2012	2015	2012	2015
Decreased Operating Costs Over One Year	7%	18%	12%	9%
Decreased Operating Costs Over Five Years	33%	19%	37%	29%
Payback Time for Green Investments (Years)	7	8	5	6



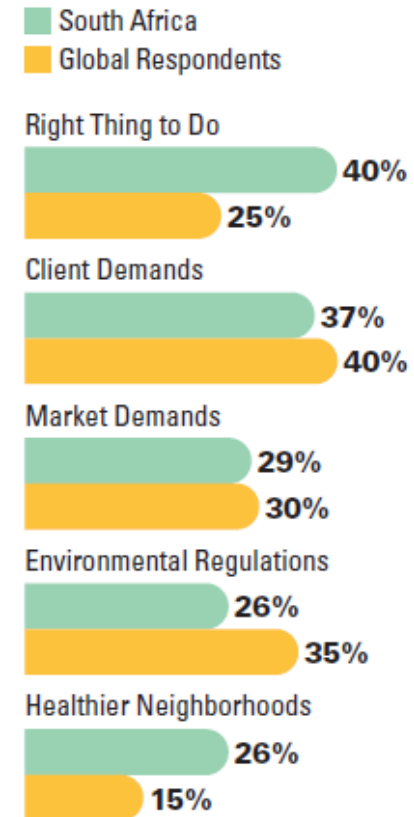
GOVERNMENT SUPPORT AND RESOURCE SCARCITY DRIVE GREEN GROWTH

- South African National Standard (SANS) 10400-XA and the SANS 204 Regulations are government regulations for energy use and encourage energy efficiency in buildings.
- Anyone planning new developments or alterations will need to ensure that their plans meet a standard of energy efficiency.
- Dec '11: Department of Water and Environmental Affairs announced the launch of a government building energy efficiency program led by the DPW



Top Triggers Driving Future Green Building Activity in South Africa

Dodge Data & Analytics, 2016





IFC AND GBCSA ARE WORKING WITH TOP RESIDENTIAL DEVELOPERS TO **CREATE** A GREEN RESIDENTIAL MARKET

EDGE CLIENTS:

RPP Developments

Devmark Property Group

Kale Developments

IHS (International Housing Solutions)

Nedbank CIB & Madulamoho Housing Association

Balwin Developments

MSP Developments

Similaran

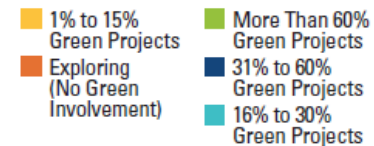
Old Mutual

STAG

MAJORITY OF DEVELOPERS EXPECT GREEN PROJECTS IN THE NEXT FEW YEARS:

Levels of Green Building Activity for Respondents From South Africa (2015 and Expected 2018)

Dodge Data & Analytics, 2016



Recent survey shows that most construction firms expect that by 2018, over 60% of their projects will be considered “green”



GREEN BUILDING COUNCIL OF SOUTH AFRICA

- GBCSA is a green leader in Sub-Saharan Africa.
- Established member-based organization with an active board and wide-reaching corporate membership.
- Dedicated team of industry professionals, technical specialists, and marketing and business development professionals.
- Administers Green Star SA and EDGE rating tools.
- Green Star is being customized for other countries across Africa.
- History of success in education, awareness, and certification for green buildings in South Africa.

www.gbcsa.org.za





EDGE EXPERTS CAN HELP INVESTORS NAVIGATE THE CERTIFICATION PROCESS

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A full list of EDGE experts can be found on the EDGE program website:
<https://www.edgebuildings.com/edge-experts/edge-experts-around-the-world>



LEARN ABOUT EDGE CERTIFIED PROJECTS IN S. AFRICA



FOUR LEAF ESTATES




Location: **Port Elizabeth, South Africa**

Client: **Similan Properties, Old Mutual Alternative Investments**

Size: **4,080 m²**

No. of Units: **323 affordable housing units**

Predicted Savings of EDGE Certification:

-  32% Energy Savings
-  25% Water Savings
-  35% Less Embodied Energy in Materials



RAVENSWOOD RESIDENTIAL DEVELOPMENT

Location: **Johannesburg, South Africa**




Client: **RPP Developments**

Owners: **International Housing Solutions**

Size : **10,180m²**

No. of Units: **188 two-bedroom homes**

Predicted Savings of EDGE Certification:

-  32% Energy Savings
-  27% Water Savings
-  48% Less Embodied Energy in Materials

Case studies from other countries: <https://www.edgebuildings.com/projects/>



EDGE CERTIFICATION IS FAST, EASY, AND AFFORDABLE



The Green Building Council South Africa is leading the transformation of the South Africa property industry to ensure that buildings are designed, built and operated in an environmentally sustainable way. GBCSA is the exclusive provider of EDGE certification in South Africa.

	80M ² OR LESS	80M ² – 250M ²	MORE THAN 250M ²
Base Fee	R42 000	R42 000	R42 000
Certification Cost	R5.00/m ²	R6.50/m ²	R8.50/m ²

**Discounts are available for members of Green Buildings Council South Africa. Hiring an auditor is required and is in addition to the cost of registration and certification.*

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



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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