GREEN BUILDINGS MARKET INTELLIGENCE
GHANA COUNTRY PROFILE
GHANA: COUNTRY SUMMARY

**MARKET GROWTH**

<table>
<thead>
<tr>
<th>Year</th>
<th>Residential</th>
<th>Office &amp; Retail</th>
<th>Other Commercial</th>
<th>% new green buildings</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>20,000</td>
<td>20,000</td>
<td>20,000</td>
<td>0%</td>
</tr>
<tr>
<td>2019</td>
<td>21,000</td>
<td>20,000</td>
<td>20,000</td>
<td>10%</td>
</tr>
<tr>
<td>2020</td>
<td>22,000</td>
<td>21,000</td>
<td>20,000</td>
<td>20%</td>
</tr>
<tr>
<td>2021</td>
<td>23,000</td>
<td>22,000</td>
<td>20,000</td>
<td>30%</td>
</tr>
<tr>
<td>2022</td>
<td>24,000</td>
<td>23,000</td>
<td>20,000</td>
<td></td>
</tr>
<tr>
<td>2023</td>
<td>25,000</td>
<td>24,000</td>
<td>20,000</td>
<td></td>
</tr>
<tr>
<td>2024</td>
<td>26,000</td>
<td>25,000</td>
<td>20,000</td>
<td></td>
</tr>
<tr>
<td>2025</td>
<td>27,000</td>
<td>26,000</td>
<td>20,000</td>
<td></td>
</tr>
</tbody>
</table>

**Total market**
- Commercial: USD 2.91 B
- Residential: USD 7.96 B
- Residential units: 100,000

**Green market**
- Commercial: USD .29 B
- Residential: USD .41 B
- Residential units: 20,000

**OTHER FACTORS**
- Considered West Africa’s “haven of stability.”
- Peaceful transition of power in last election.
- Growth rate surpassed IMF targets and inflation is dropping.

**CLIMATE POLICIES (NDCS)**
- Under unconditional emission reduction goal - emissions expected to decrease by 12% and 15% relative to BAU emission levels in 2025 and 2030 respectively.

**MARKET STATUS**
- Ghana is estimated to have a deficit of over 1.7 million housing units.

- The GHGBC with the assistance of the South African GBC has customized the Greenstar rating tool for use nationally as GREENSTAR GH. EDGE was launched in 2017.
- Policy directive of using 60% local materials in all public infrastructure.
- GDP from construction is 3,037 GHS Million. (8th largest in Africa)

**GREEN BUILDING PROGRAMS**
- Advocacy and awareness by Ghana Green Building Council (GHGBC).
- EDGE program launched in May 2017, supported by core person from IFC as well as from SGS, the global certifying firm serving as a local partner.
- EDGE Experts are being trained.
- MOUs in progress with: EPA (for permitting compliance), GREDA (Ghana Real Estate Developers association), Ghana Home Loans, and Appolonia City (large development on outskirts of Ghana).
- IFC is actively promoting green options at industry conferences.
STEADY MARKET GROWTH EXPECTED

- Ghana is facing economic issues due to lower oil prices, but political stability and smart economic planning of the new administration will result in increased construction.
- Residential is experiencing high growth: housing needs, the availability of new financial instruments and the expansion of Ghana’s electrical grid will support residential growth.
- Retail market remains stable but will be tied to the exchange rate and inflation.
- Office market remains relatively flat and performance will depend on desirable locations.

TOTAL MARKET SIZE 2018-25 (USD BILLIONS)

Source: Navigant Research Global Building Stock Database, Broll Sub-Saharan Africa Snapshot 2017
GREAT EXPECTATIONS FOR THE GREEN MARKET

IFC’s EDGE program is working across all sub-sectors for green penetration throughout the construction industry.

<table>
<thead>
<tr>
<th>Sub-Sector</th>
<th>Green penetration projected in 2025</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office</td>
<td>22%</td>
</tr>
<tr>
<td>Retail</td>
<td>20%</td>
</tr>
<tr>
<td>Healthcare</td>
<td>2%</td>
</tr>
<tr>
<td>Hotels &amp; Restaurants</td>
<td>22%</td>
</tr>
<tr>
<td>Institutional and Assembly</td>
<td>20%</td>
</tr>
<tr>
<td>Warehouse</td>
<td>22%</td>
</tr>
<tr>
<td>Residential</td>
<td>Apartments/Flats</td>
</tr>
<tr>
<td>Residential</td>
<td>Single-Family</td>
</tr>
<tr>
<td>Residential</td>
<td>Social Housing</td>
</tr>
</tbody>
</table>

Respected global business will serve as strong local implementation partner: the consortium of SGS-thinkstep will serve as the sole provider of certification services for EDGE in Ghana.

IFC is building partnerships with key players:
- GREDA (Ghana Real Estate Developers Association)
- Ghana Home Loans
- Appolonia City (large development on outskirts of Ghana)
- Permitting process through EPA

Source: IFC projections
GREEN FUNDS SUPPORT:

- Ghana's Venture Capital Trust Fund offers support to real estate developers who build socially and environmentally responsible homes.
- “The total Fund size is almost $20 million; they can apply and start simple real estate for low-cost housing”, Chief Executive Officer, Daniel Duku, encouraged investors to source the fund.
GHANA GREEN BUILDING COUNCIL (GHGBC):

- Ghana Green Building Council (GHGBC) is a non-governmental organization and private-public partnership that is committed to help create sustainable buildings/communities in Ghana using energy savings, water conservation, resource management and cost-efficient techniques.

- The GHGBC provides green building resources, education and leadership opportunities to all stakeholders in the construction industry to help in the transformation process towards sustainability.

CONTACT AT HTTP://WWW.GHGBC.ORG/
THE EXCHANGE IS THE FIRST EDGE CERTIFIED PROJECT IN GHANA

The Exchange is a partnership of a number of stakeholders who are utilizing IFC’s EDGE green building software and program in their operations:

FINANCING:

IFC  
ACTIS  
CDC

DESIGN:

h+k

CONSTRUCTION:

BOUYGUES CONSTRUCTION

OPERATION:

CARLSON REZIDOR HOTEL GROUP

Hotel Case Study

Residence Case Study

Predicted Savings of EDGE Certification

22% Energy Savings
24% Water Savings
22% Less Embodied Energy in Materials
30% Energy Savings
25% Water Savings
28% Less Embodied Energy in Materials
EDGE CERTIFICATION IS FAST, EASY, AND AFFORDABLE

<table>
<thead>
<tr>
<th>PROJECT TYPE</th>
<th>CERTIFICATION</th>
<th>DESIGN AUDIT</th>
<th>FINAL AUDIT</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential (one unit type)</td>
<td>$1,480</td>
<td>$3,600</td>
<td>$3,650</td>
<td>$8,730</td>
</tr>
<tr>
<td>Residential (per additional unit type, up to three types)</td>
<td>$490</td>
<td>$390</td>
<td>$390</td>
<td>$8,730</td>
</tr>
<tr>
<td>Commercial (single end use)</td>
<td>$1,480</td>
<td>$3,600</td>
<td>$3,650</td>
<td>$8,730</td>
</tr>
<tr>
<td>Mixed-Use Buildings (per additional end use)</td>
<td>$990</td>
<td>$2,670</td>
<td>$1,560</td>
<td></td>
</tr>
</tbody>
</table>

*Discounts are available for projects where the client has hired an EDGE Expert as well as for consecutive project registrations. For multi-use buildings, residential buildings with more than three unit types, or complex projects with multiple buildings, contact SGS for custom pricing.*

Details are registration forms can be found on the EDGE program website: https://www.edgebuildings.com/certify/ghana
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.
DONOR ACKNOWLEDGEMENT

IFC thanks the following national donors for their generous support of the EDGE program: the State Secretariat for Economic Affairs of Switzerland (SECO); the European Union; the Ministry of Finance of Japan; the Hungarian Export Import Bank; the Canada Climate Change Program and the Department of Foreign Affairs, Trade and Development Canada; the Royal Ministry of Foreign Affairs of Denmark and the Danish Green Growth Fund; the Federal Ministry of Finance of Austria; and the Ministry of Foreign Affairs of Finland.

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COLLABORATION ACKNOWLEDGEMENT

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