

GHANA GREEN BUILDING MARKET SNAPSHOT 2020¹

This Green Building Market Snapshot provides a summary of key market indicators based on IFC's research on policy environment and the market penetration of Green Building certification and green finance. Additionally, most recent Green Building developments in the market are included where available. IFC welcomes readers' comments.

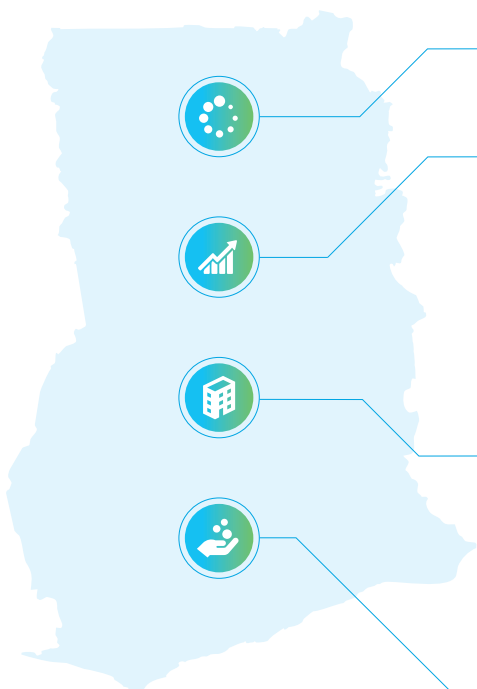


CERTIFIED GREEN BUILDING MARKET STATUS : NASCENT

While Ghana has a vibrant real estate market, as of 2020 its Green Building market continues to be nascent. Apart from a few commercial buildings, certified Green Buildings do not exist. Certified Green Buildings comprised around 1%² of new builds. The country's broad housing deficit, small formal construction market and number of developers, insufficient focus, and incentives for Green Building market development are some of the reasons for a thin Green Building market.



COUNTRY LANDSCAPE



- **Energy Consumption:** Around 46% of electricity is consumed by the residential sector.³ The country relies on a diversified energy mix and hosts the largest hydropower project of the Western African region.⁴
- **Construction Market:** Ghana's residential market is characterized by informal urban housing settlements. In Accra, 58% of population live in informally built housing, with 65% of households occupying a single room.⁵ In terms of formal constructions, Ghana's construction industry is mainly dominated by residential and commercial office properties, and a large percentage of the construction takes place in the capital city, Accra.⁶ The country's housing deficit was estimated at 2 million units in 2018. There is a severe backlog of low-income housing and stakeholders estimate needing more than 3 million houses by 2025.
- **Developers:** Ghana's real estate sector has expanded over the past three years due to a concentration of developers operating in the mid to high-end segments, the arrival of non-resident Ghanaians as well as foreign investors such as Grit, a REIT, and GREA, a German corporate finance and investment management firm.⁷ According to IFC's analysis based on the Ghana Real Estate Developers Association, 67% of developers have fewer than 10 houses in construction, 27% of developers have more than 25 houses in construction a smaller portion of 9% of developers is in between these two categories.⁸
- **Finance:** The mortgage debt as a proportion of the overall household debt to GDP (0.5%) is relatively low as few households take mortgage loans.⁹

1. GREEN BUILDING POLICIES AND REGULATIONS

Is there a national definition of Green Building?

There is no specific Green Building definition in the country, the building code section 37 focuses on Green Buildings and sustainability and provides prescriptive and performance routes to meet the Green Building requirements of the code.¹⁰

Is Green Building part of the country's Nationally Determined Contributions (NDC)?

Ghana aims to implement 34 mitigation measures to achieve absolute emission reductions of 64 MtCO₂e by 2030. The expected emission reduction amount constitutes 88% of emissions in the following sectors: Energy, Industrial Processes and Product Use, Land Use, Land Use Change and Forestry (LULUCF) and Waste consistent with 2006 IPCC guidelines.¹¹ There are no specific measures for Green Buildings.

Is there a national Green Building strategy/action plan?

No, although the building code includes energy efficiency requirements and recommendations.

Public Policy and Regulations

Ghana Building Code 2018 Part 14 Energy Efficiency and Sustainability

The code sets out requirements and recommendations for energy efficiency for mechanical ventilations systems, refrigeration equipment, hot water systems and lighting systems.¹²

National Energy Policy (2010)

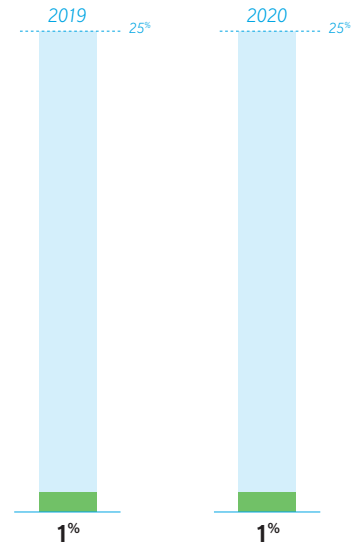
Recognizes the need to improve end-use energy efficiency. The "Energy for All" program provides an opportunity to green the building sector.

2. GREEN BUILDING MARKET SIZE

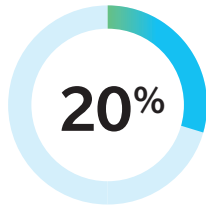
New and existing floor space certified green in 2020: 0.03 million square meters



Share of certified new green buildings among all new developments (based on square meters)



Share of green building developers among major developers¹³



3. CERTIFICATIONS AND STANDARDS

National Green Building Rating Systems NA

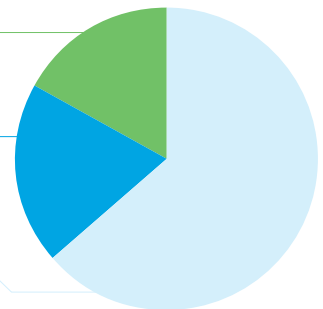
International Green Building Rating Systems

- ▶ Green Star SA-GH was established in 2013 and has certified 1 project of 20,250 sqm as of 2020
- ▶ EDGE was established in 2016 and has certified 0.1 million sqm as of 2020
- ▶ LEED was established in 2011 and has certified 0.02 million sqm as of 2020

Voluntary Green Building certification systems' market share by square meters certified (as of 2020).

- ▶ Green Star is 13% of cumulative GB
Green Star non-residential 100%
- ▶ EDGE is 73% of cumulative GB
EDGE residential 9%, non-residential 91%
- ▶ LEED is 15% of cumulative GB
LEED non-residential or mixed-use 100%

Totals may not add up to 100% due to rounding.



4. GREEN BUILDING FINANCE

Financial Institutions offering Green Building finance (by public/private) and their products as of 2019

- ▶ While there is no Green Building finance in the country, CalBank through SUNREF Ghana offers an energy efficiency loan for equipment with competitive terms for homeowners and businesses.¹⁵

Green bonds or other capital market instruments earmarked for Green Building finance between 2015 and 2020.

N/A

- ▶ **(2021 Update)** On May 5th, 2021, IFC and Ghana's Securities and Exchange Commission (SEC) announced a partnership to facilitate investments in projects that address climate and environmental issues through green bonds. Under the agreement, IFC will help the SEC develop guidelines for issuers and investors for green bonds in Ghana.¹⁶

5. COST OF UTILITIES

Share of cost of utilities (Electricity and Water) for an average income: 12%¹⁷



6. EDUCATION AND SKILLS

Accra Technical University offers a Green Building program.¹⁸

- ▶ Accra Technical University offers a Green Building program.

ENDNOTES

1. If not footnoted, the source of the information is a report prepared by the JLL "State of the Real Estate market in Ghana" commissioned by IFC in 2019.
2. IFC's calculations consider the formal construction sector. The rate covers EDGE post-design and LEED and Green Star certified floor area for calendar year 2020. There may be a delay between certification and completion of the building. LEED numbers were retrieved from the USGBC website (<https://www.usgbc.org/projects>) on October 19, 2021. EDGE numbers were retrieved from EDGE App data as of September 30, 2021. Green Star numbers were estimated by IFC based on JLL's report "Green building market assessment Ghana (2019)", commissioned by IFC, and "Towards an Uptake Framework for the Green Building Concept in Ghana: A Theoretical Review" by L.F Anzagira, E Badu, D Duah (2019). Green certification numbers do not differentiate between buildings certified with more than one certification system or product (that is, each certification is counted as unique) and include certifications for existing buildings. Estimated new build was estimated by IFC, based on several sources including JLL's report "Green building market assessment Ghana" (commissioned by IFC in 2019) and Navigant.
3. IEA World Energy Balances <https://www.iea.org/data-and-statistics/data-product/world-energy-statistics-and-balances>
4. IEA, <https://www.iea.org/countries/ghana>
5. <https://theconversation.com/why-accras-property-boom-hasnt-produced-affordable-housing-165016>
6. "Towards an Uptake Framework for the Green Building Concept in Ghana: A Theoretical Review, 2019" L.F. Angarazira, E. Badu, D. Duah
7. Ghana Real Estate Market Report 2021, northcourt
8. IFC analysis performed based on the number of members and membership category criteria of the Ghana Real Estate Developers Association available at: <https://gredaghana.org/greda-members/#1547475253579-5b47859a-084a>
9. Africa Housing Finance Yearbook 2021. Available at: <https://housingfinanceafrica.org/app/uploads/2021/11/Ghana.pdf>
10. Available at: <https://codes.iccsafe.org/content/document/1268>
11. Ghana Updated Nationally Determined Contribution under the Paris Agreement (2020 - 2030), Page 12. Available at: <https://www4.unfccc.int/sites/NDCStaging/Pages/All.aspx>
12. 2018 Ghana Building code - Building and Construction, Part 14. Available at: <https://codes.iccsafe.org/content/document/1268>
13. IFC's calculations based on the number of developers that obtained an EDGE certification out of the top 10. The list of top 30 developers in Ghana was obtained from the blog "Top 30 Real Estate Companies In Ghana 2020 - Meqasa Blog" available at: <https://blog.meqasa.com/top-30-real-estate-companies-in-ghana/>
14. IFC's estimate based on LEED publicly available data.
15. Source: CalBank's website: <https://calbank.net/business-banking/financing/calbank-sunref-financing-programme/>
16. <https://pressroom.ifc.org/all/pages/PressDetail.aspx?ID=26337>
17. Calculated based on data of the following sources: for 2019 electric power consumption per capita Enerdata (<https://www.enerdata.net/estore/energy-market/ghana/>), for Cost of electric power kWh in USD for Households Global Petrol Prices (https://www.globalpetrolprices.com/Ghana/electricity_prices/), for the Average water consumption per capita per day "Badsha, Mohammad. (2016). Assessment of the Integrated Urban Water Management Strategic Plan of Accra City. IUBAT Review. 1. 37-46", GNI per capita Ghana USD (<https://data.worldbank.org/indicator/NY.GDP.PCAP.CD?locations=GH>)
18. The source of this information is IFC's own analysis.

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