

# MEXICO GREEN BUILDING MARKET SNAPSHOT 2020<sup>1</sup>




This Green Building Market Snapshot provides a summary of key market indicators based on IFC's research on policy environment, building construction, and Green Building certification and finance. The year of the snapshot coincides with the launch of the UK-IFC Market Accelerator for Green Construction program in the country. Additionally, most recent Green Building developments in the market are included where available. IFC welcomes readers' comments.

## CERTIFIED GREEN BUILDING MARKET STATUS: UNDERDEVELOPED MARKET BUT STRENGTHENING

As of 2020, certified Green Building construction and finance markets in Mexico were underdeveloped but gradually growing. The certified Green Building market penetration was around 5% and certified buildings were mainly in the non-residential sector in 2020.<sup>2</sup> The potential for development of the certified building market is immense. The Ecocasa and INFONAVIT green mortgage programs support the development of Green Building with their sustainability requirements, but these programs do not necessarily comply with international certification standards. IFC estimates that most of the current affordable houses financed by INFONAVIT green mortgages can meet certification standards like EDGE without significant incremental cost. From a policy perspective, Mexico has policies supporting sustainable buildings and Green Building programs. However, lack of coordination and coherence in government policies pose barriers to further development of the Green Building market. In terms of financing, both public and private financial institutions provide Green Building financing. However, apart from Ecocasa and INFONAVIT's green mortgage program, financing for green buildings



### COUNTRY LANDSCAPE

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**Energy Consumption:** Buildings in Mexico consumed around 20% of the total energy generated in 2019 and that consumption has been on the rise since the beginning of the 2000s.<sup>3</sup>
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**Construction Market:** The real estate sector in Mexico has grown significantly the past ten years. Yet, the pace of construction has declined since 2017, and the pandemic contributed to the decrease. In addition, changes in housing policy and a budget cut to the Comisión Nacional de Vivienda's (CONAVI) subsidy program have caused a drop in production in the affordable housing segment, especially in metropolitan cities such as CDMX, Monterrey and Guadalajara. The residential real estate sector in Mexico is expected to recover, considering demographics conditions in the country. In terms of commercial buildings, the economic crisis had a negative impact on construction levels and recovery is expected after 2023.
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**Developers:** Self-built housing comprises around 55% of residential buildings and the share of self-built houses is increasing among residential constructions. Real estate developers produce, on average, 300,000 new housing units each year. The majority of developers are national.
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**Finance:** Around 45% of housing units were acquired through a formal loan. Construction and mortgage finance markets are highly concentrated in Mexico. From April 2019 to March 2020, the financial institutions granted a total of 521,754 mortgage credits worth USD 16 billion. Of this, the credits granted by national housing institutions (INFONAVIT and FOVISSSTE) represented around 70% of credits (50% by volume). The rest was provided by commercial banks. Among the mortgage loans provided by commercial banks, around 65% were granted by three banks.<sup>4</sup>

## 1. GREEN BUILDING POLICIES AND REGULATIONS

### Is there a national definition of Green Building?

While a national definition of Green Buildings does not exist in Mexico, the set of mandatory regulations and standards known as *Norma Oficial Mexicana* (NOM) provides insights on sustainable buildings. In addition, the government's Ecocasa and INFONAVIT green mortgage programs set minimum requirements for a building to be called "green."

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

Mexico has committed to a reduction of greenhouse gas emissions (GHG) and 51% of black carbon emissions by 2030 as compared to the country's baseline business as usual scenario (i.e., emission projections based on economic growth in the absence of climate change policies.) The residential sector is included in the country-wide GHG emission reduction target calculations.<sup>5</sup>

### Is there a national Green Building strategy/action plan?

As of 2020, Mexico does not have a national Green Building strategy/action plan.

### Public Policy and Regulations

#### NOM-008-ENER-2001

- ▶ In Mexico, energy consumption is primarily related to air conditioning during the warm season in coastal and northern zones. This policy is for energy efficiency of non-residential buildings to limit heat gains related to the building envelope, as regulated by the Secretary of Energy. The code applies to both new construction and renovation of existing buildings (industrial buildings are excluded). To demonstrate compliance, the building is provided with a label.

#### NOM-020-ENER-2011

- ▶ For energy efficiency of residential buildings to limit heat gains related to the building envelope and ensure thermal comfort. The code applies to both new construction and renovation of existing buildings.

#### Norma Mexicana (NMX):

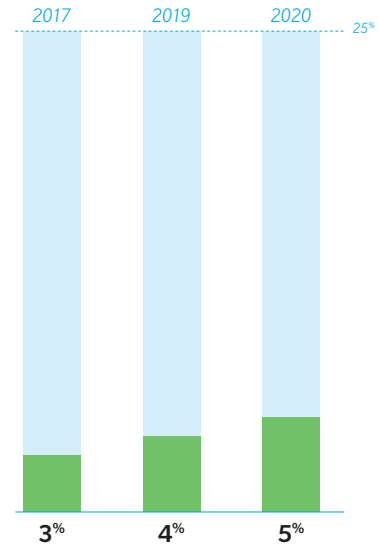
- ▶ Establishes the minimum quality requirements for products and services, with the aim of protecting and guiding consumers. NMXs are not mandatory. The National Agency for Standardization and Certification of Construction and Building, S.C. (ONNCCE), the NOM and the NMX identify more than 16 NMXs regarding Green Building in the publication "Energy Conservation Code for Buildings of Mexico" (IECC - MEXICO).
- ▶ The Federal Mortgage Society (SHF) in partnership with KfW and the Inter-American Development Bank established the EcoCasa program in 2013. The objective of the program is to achieve a reduction of at least 20% and up to the highest percentage of CO2 emissions. The program integrates sustainability criteria through four tools: Energy Efficiency (DEEVi), Water Consumption (SAAVi), Urban Environment (HEEVi), and the Carbon Footprint of materials. The program has provided USD 400 million in concessionary financing for 61,979 homes between 2013 and 2020.<sup>6</sup>
- ▶ INFONAVIT is a government agency that issues green mortgages through a 5% mandatory salary reduction from private sector employees. All credits granted by INFONAVIT are subject to being incorporated as green mortgage, as long as houses are equipped with eco-technologies. In this respect, the green mortgage is an additional amount that is awarded to all credits, with the additional amount being determined according to the salary and savings achieved with eco-technologies. For new homes, eco-technologies have to meet the minimum monthly savings requirements according to the savings table published by INFONAVIT.<sup>7</sup>

## 2. GREEN BUILDING MARKET SIZE

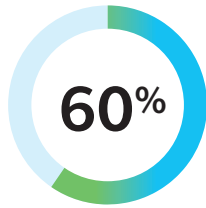
New and existing floor space certified green in 2019: 1.7 million square meters



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



Share of green building developers among major developers<sup>8</sup>



## 3. CERTIFICATIONS AND STANDARDS

### National Green Building Rating Systems

The Sustainable Building Certification Program (PCES) is in charge of the Directorate of Impact Assessment and Environmental Regulation (DGEIRA) and aims to promote and encourage the reduction of polluting emissions, as well as efficient use of natural resources during the design, construction and operation of buildings in Mexico City. PCES was established in 2008. There is no public information on how many square meters PCES has certified.

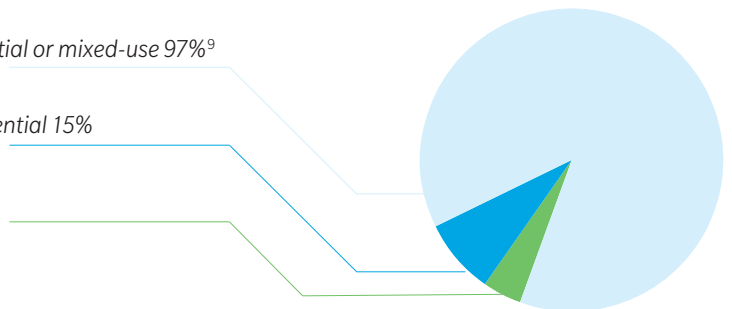
### International Green Building Rating Systems

**There are three active international Green Building rating systems in Mexico: LEED, EDGE, and BOMA.**

- ▶ LEED was established in 2010 and has certified 9.1 million sqm, as of 2020.
- ▶ EDGE was established in 2012 and has certified 0.8 million sqm as of 2020.
- ▶ BOMA Building Environmental Standards (BOMA BEST), operated by Building Owners and Managers Association International, an international non-profit association, certified 0.4 million sqm as of 2020.

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

- ▶ LEED is 88% of cumulative GB  
*LEED residential 3%, non-residential or mixed-use 97%*<sup>9</sup>
- ▶ EDGE is 8% of cumulative GB  
*EDGE residential 85%, non-residential 15%*
- ▶ BOMA is 4% of cumulative GB  
*BOMA non-residential 100%*



## 4. GREEN BUILDING FINANCE

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

#### BBVA:

- ▶ The bank offered two corporate credits classified as green. The first one was a green corporate loan, signed with Iberdrola for USD 400 million in 2018. The second one was a green credit for USD 10.6 million to Grupo Altex, signed in 2020.

#### HSBC:

- ▶ In 2020, the Bank has extended a green loan to the European company Ikano Group to build its first production plant in Mexico.

#### INFONAVIT:

- ▶ This fund, a pension fund for private sector employees and the main provider of funds in the Mexican mortgage market, granted 282,719 green mortgages as of 2020.
- ▶ Banco Base, Unión de Crédito Concreces, ION Financiera, Metrofinanciera, Unión de Crédito General, Unión de Crédito de la Industria de la Construcción Sonora, Unión de Crédito para la Contaduría Pública, Banco Inmobiliario Mexicano, and ABC Capital have provided construction loans or green mortgages as part of the Ecocasa program.

### Green bonds or other capital market instruments earmarked for Green Building finance between 2015 and 2019.

- ▶ In 2018, BBVA was the first financial corporation to issue a green bond in Mexico. Just over half (54%) of the USD 186 million bond's proceeds were allocated to low-carbon buildings.<sup>10</sup>
- ▶ In 2018, Mexico City's government issued a USD 54 million green bond, 25% of which were allocated to finance low-carbon building sector projects, including child development centers.<sup>11</sup>
- ▶ Vinte, a housing developer, issued its first sustainability bond for a total of USD 42 million in 2018 and the second sustainability bond for USD 20 million in 2020.<sup>12</sup>
- ▶ Coca-Cola FEMSA issued a USD 705 million green bond in 2020. The bonds proceeds, the largest ever for the Latin American corporation, will be utilized to reduce the corporation's carbon footprint with the goal of decreasing its GHGs by 28% across its value chain.<sup>13</sup>
- ▶ CADU Real Estate, a housing developer, issued the first Certified Climate Bond in Latin America in 2020. A part of the bond, funds are allocated to building new houses with the EcoCasa or Edge certifications.<sup>14</sup>
- ▶ (2021 Update): FIBRA Prologis, owner and operator of Class-A industrial real estate in Mexico, raised USD 370 million in a green bond offering that will be used to finance debts on its eligible green project portfolio.<sup>1</sup> FIBRAs are trust vehicles that finance acquisition and/or construction of real estate, equivalent to Real Estate Investment Trusts (REITs) in the United States; 7 out of the 15 FIBRAs represented by the Mexican Association of Real Estate included certified Green Buildings and ESG investments in their portfolio.

### Financial institution lending to Green Buildings as a % of total lending to building sector (Climate financing as a % of total bank credit)

- ▶ Green financing accounted for roughly 1.37% of the total banking sector lending in Mexico in 2020.<sup>16</sup> IFC estimates that certified Green Building finance comprised less than 1% of the total loan portfolio.<sup>17</sup>

## 4. GREEN BUILDING FINANCE, *Continued*

### Financial Incentives

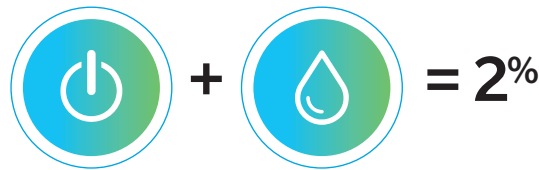
The National Workers' Housing Fund (INFONAVIT) developed the Green Mortgage housing finance scheme to encourage the use of energy-efficient systems and technologies for low-income households. Families purchasing homes with INFONAVIT are issued an additional green mortgage (a credit on top of the actual mortgage credit) of up to \$2,670 (54,488 Pesos), to cover the cost of additional eco-technologies. The initiative aims to encourage developers to build homes with energy-saving materials and technologies, and the low-rate mortgage enables families to save more on their utility bills than the increase in their monthly mortgage payment. By the end of 2020, the green mortgage was responsible for the installation of approximately 70,000 eco-technologies.<sup>18</sup>

#### **The Ministry of Environment of Mexico City offers the following fiscal incentives:<sup>19</sup>**

- ▶ Homeowners and landlords may obtain a reduction of up to 20% of water utility municipal tax if energy-saving eco-technologies are installed. The installed systems must ensure a 20% reduction in the consumption of electricity and/or water or recycling of rainwater.
- ▶ Homeowners and landlords with green areas occupying at least a third of the premises are entitled to a 25% reduction in their property tax.

## 5. COST OF UTILITIES

Share of cost of utilities (Electricity and Water) for an average income: 2%<sup>20</sup>



## 6. EDUCATION AND SKILLS

### Number of Universities offering Green Building programs

- ▶ In 2020, the enrollment of students in bachelor's and postgraduate degrees related to energy efficiency, green engineering, green construction, green urban design, sustainability, climate change, and green law was 52,000 students.

## ENDNOTES

1. If not footnoted, the source of the information is a report prepared by Deloitte Mexico commissioned by IFC in 2021.
2. IFC's calculations consider the formal construction sector. The rate covers EDGE post-design, LEED and BOMA certified floor area divided by estimated new build for the formal sector, for calendar year 2020. There may be a delay between the certification and the completion of a building.  
LEED numbers are estimated by Deloitte (commissioned by IFC) based on information retrieved from USGBC website (<https://www.usgbc.org/projects>).  
BOMA numbers were retrieved from <http://bomacanada.ca/bomabest/certifiedbuildings/>  
EDGE numbers were retrieved from EDGE App data as of September 30, 2021.  
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 may include certifications for existing buildings.  
Estimated new build is based on Deloitte Mexico Green Building assessment 2020 (commissioned by IFC).  
INFONAVIT and Ecocasa green mortgage programs were not included in the calculation as Ecocasa has a limited scope and the green mortgage program has set only minimum requirements that may not comply with international certification standards. The INFONAVIT and Ecocasa programs provided 282,719 and 13,071 green mortgage loans in 2020 respectively.
3. Mexico Secretary of Energy (2021). Energy Information System, <https://sie.energia.gob.mx/bdiController.do?action=cuadro&cvequa=IE7C02>
4. <https://www.banxico.org.mx/publicaciones-y-prensa/rib-creditos-a-la-vivienda/%7BA3DB29BD-E083-AF45-60CC-A1217BEDB8E2%7D.pdf>
5. <https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Mexico%20First/NDC-Eng-Dec30.pdf>
6. <https://www.gob.mx/shf/documentos/ecocasa-programa-de-cooperacion-financiera?state=published>
7. See: [https://portalmx.infonavit.org.mx/wps/wcm/connect/fecceae6-2388-46cf-93f9-2524136bdd96/Ahorros\\_Ecotecnologias.pdf?MOD=AJPERES&CVID=n71VfPz](https://portalmx.infonavit.org.mx/wps/wcm/connect/fecceae6-2388-46cf-93f9-2524136bdd96/Ahorros_Ecotecnologias.pdf?MOD=AJPERES&CVID=n71VfPz)
8. Calculated based on the number of developers that have at least one green certified building out of the top fifty developers in Mexico.
9. IFC's estimate based on LEED publicly available data.
10. Climate Bonds Initiative (2020). Financing Low-carbon Buildings in Mexico Report. [https://www.climatebonds.net/files/reports/cbi\\_mexicoconstruction\\_english.pdf](https://www.climatebonds.net/files/reports/cbi_mexicoconstruction_english.pdf)
11. Ibid.
12. Ibid.
13. FEMSA(2020). Press Release: Coca-Cola FEMSA prices US\$ 705 million green bond, the largest ever for a Latin American corporation.
14. [https://mstar-sustops-cdn-mainwebsite-s3.s3.amazonaws.com/docs/default-source/spos/cadu-green-bond-framework-second-party-opinion.pdf?sfvrsn=8fa68fdc\\_3](https://mstar-sustops-cdn-mainwebsite-s3.s3.amazonaws.com/docs/default-source/spos/cadu-green-bond-framework-second-party-opinion.pdf?sfvrsn=8fa68fdc_3)
15. FIBRA Prologis. Press Release: FIBRA Prologis Refinances US\$370 million through a Green Private Placement in the US and a Green Bond in the Local Market
16. IFC internal calculations.
17. IFC excluded national housing institution mortgages with green features from the calculations. INFONAVIT provided approximately 70% of mortgages in the country. 85 percent of these included at least a green technology in 2020.
18. World Habitat Awards. INFONAVIT Green Mortgage Award.
19. <https://www.sedema.cdmx.gob.mx/servicios/servicio/constancias-de-regulacion-e-incentivos-fiscales>
20. Calculated based on the Economist Intelligence Unit Database for country utility data in major cities using Mexico City (2019) and the World Bank GNI per capita 2019.

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**UK Government**

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