Global Sustainable Buildings Guide - Brazil

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# Authors

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***Disclaimer:*** *Trench Rossi Watanabe and Baker McKenzie have executed a strategic cooperation agreement for consulting on foreign law.*

# Green Certification

## Is there a nationally adopted and recognized form of certification for buildings? What is it and is it mandatory for all new buildings and refurbished buildings?

In Brazil, the development of the sustainable construction market has been promoted by financing from the Federal Development Bank (Banco Nacional de Desenvolvimento Econômico e Social or BNDES), tax incentives in municipal laws and recent changes to the Public Procurement Law, which includes environmental measures as a criterion for bid proposals. Mostly, though, sustainable construction has been prompted by realization in the market that adoption of green construction principles offers economic advantages.

The economic advantages are mainly flowing to those that look for sustainable construction for their homes or those that add value to their brands.

Internationally known certifications, such as the Leadership in Energy and Environmental Design (LEED) from the Green Building Council (GBC), are broadly adopted in Brazil. The accreditation is conducted by GBC Brazil and follows international principles. By 2023, Brazil had at least 3,500 buildings certified with a green certification or in the process of being certified.

Another broadly recognized certification in Brazil is Alta Qualidade Ambiental (AQUA), which is derived from the French Haute Qualité Environmentale (HQE) sustainability assessment, and consists of a methodology for certifying environmental management systems and the environmental quality of buildings.

The Federal Savings Bank (Caixa Econômica Federal) also has created a certification named “Selo Casa Azul,” intended to support and promote sustainable housing. Eletrobras, a government-owned company in the electric power sector, created the National Program for Energy Efficiency in Buildings (“**PROCEL** **Edifica”**), a certificate that measures energy performance in buildings.

From the same founders of the AQUA-HQE certification, the most recent certification in Brazil is the AQUA SOCIAL, created by the Vanzolini Foundation in 2018 to certify housing and economic developments of social interest eligible for the Minha Casa, Minha Vida Program, the federal government program that makes it easier for low-income families to buy their own homes. Certifications are voluntary in Brazil, but there is a plan for the PROCEL Edifica to become mandatory for all future construction.

# Energy Performance Certificates and Minimum Energy Standards

## Is there a mandatory form of energy performance certification? When does it apply and are there any prescribed minimum standards?

In Brazil, PROCEL Edifica was established in 2003 by Eletrobras, a government-owned company responsible for the generation, transmission and distribution of electric power in Brazil. It acts together with the Ministry of Mining and Energy, the Ministry of the Cities, universities and research centers to develop and promote the energy efficiency of buildings, especially in relation to water consumption, power, and improvement of ventilation systems.

Obtaining the PROCEL Edifica certificate is still voluntary, but it is expected to become mandatory for new buildings in the future.

Holders of the PROCEL Edifica have access to specific lines of credit granted by the BNDES. The most relevant line of credit and benefits relate to the construction of hotels and tourism facilities, which have access to extended deadlines for repayment of the debt.

The debate on the energy efficiency of buildings increased significantly in 2015. A recent study prepared by the GBC, the Ministry of Environment and United Nations Program for the Environment (PNUMA) Brazil focused specifically on energy efficiency and water consumption. The study contains several propositions to improve buildings and promote a transition to green energy. Propositions range from the creation of tax incentives to obliging efficiency measures.

The Energy Efficiency Law (10.295/2.001), regulated by Decree No. 9.864/2019, establishes minimum energy efficiency indexes for equipment sold in Brazil and in buildings, to be implemented through specific regulations. These minimum energy efficiency levels should be defined by the Energy Efficiency Indicators Steering Committee (CGIEE), coordinated by the MME and made up of representatives from government institutions and civil society.

The only mandatory certification is applied to public buildings. SLTI Normative Instruction No. 02/2014/MPOG makes the National Energy Conservation Label (ENCE) for energy efficiency (level A) mandatory for new federal public buildings and those renovated with federal funds to carry out administrative activities or provide public services.

# Incentives for Green Retrofit

## Are there any government-funded or sponsored schemes for improving the energy efficiency of existing buildings and, broadly, how do they work?

In Brazil, incentives mainly relate to specific lines of credit granted by the BNDES, which apply to both building renovations and new constructions. The Environmental Line of Credit focuses on the promotion of environmental efficiency principles in projects, and the Energy Efficiency Line of Credit focuses on projects that intend to reduce a project’s environmental impact through the reduction of power consumption.

The BNDES is a state-owned financial institution that acts as an auxiliary agency in implementing the federal government’s credit and development policy. Furthermore, the National Energy Plan 2050 stipulates that the promotion of new public policy mechanisms in Brazil should be implemented in the area of energy efficiency, especially in buildings, through the agenda of minimum energy efficiency indexes, encompassing equipment, building envelopes and operational performance indices.

In relation to public procurement, Federal Decree No. 7,762/2012 created the Inter-ministerial Commission of Sustainability in the Public Sector (CISAP) and established the inclusion of sustainable parameters in bids promoted by governmental authorities and government-owned companies. When hiring building construction contractors, invitations to bid may impose the adoption of: (i) parameters of power efficiency; (ii) reduction of water consumption; (iii) preference for local raw materials; and (iv) obligation to use materials with certificates of regular origin, especially in relation to wood. The certifications may also be used as technical criteria when awarding contracts.

In addition, the Brasil Mais Produtivo (More Productive Brazil) program was created, bringing innovation to micro and small companies with the support of a local innovation agent, who applies an agile methodology to solve problems and optimize processes. The companies assisted will embark on a digital transformation journey that includes optimizing production processes and increasing energy efficiency, culminating in low-interest loans or non-refundable resources for adopting technologies linked to industry 4.0 (whose mode of production is based on work automation, robotics, artificial intelligence, data intelligence, among other innovations) and smart factories.

Additionally, Law 14.300, enacted in 2022, established a legal framework for micro and mini generation of energy. These modalities allow consumers to produce their own energy from renewable sources. This decentralized form of energy production is still being regulated and implemented in Brazil.

# CO2 and Energy Targets

## Are there any national targets for CO2 reduction and/or energy use reduction from buildings? If there are, are there any exclusions?

As a non-Annex I country, Brazil’s participation in the United Nations Framework Convention on Climate Change (UNFCCC) and the Kyoto Protocol focuses on the Clean Development Mechanism (CDM). Among other opportunities, the CDM stipulates that developing countries may obtain foreign investments to implement clean energy, emission reductions and carbon sink projects in exchange for emission credits granted to the developed countries making the investments. There is also an opportunity for developing countries to implement “unilateral CDM projects” without the participation of developed nations.

Law No. 12,187/2009 sets forth the National Policy on Climate Change (Política Nacional sobre Mudança do Clima or PNMC) and its voluntary commitment to reduce greenhouse gas emissions by 2020 at a range between 36.1% and 38.9%. The plan defines actions and measures to mitigate the effect of climate change. It has specific objectives, which are as follows: (i) promoting energy efficiency in the economic sectors by constantly searching for better practices; (ii) keeping the high share of renewable energy in the electricity matrix; (iii) encouraging a sustainable increase in the share of biofuels in the national transport matrix and working towards the structuring of an international market of sustainable biofuels; (iv) seeking a sustained reduction of deforestation rates in all Brazilian biomes to reach zero illegal deforestation; and (v) encouraging reforesting and forestation activities under the CDM. The law states that plans for reduction per sector, including the construction sector, may be established by regulation.

Federal Decree No. 7,390 of 9 December 2010 stipulates that public policies and governmental programs must always ensure that applicable policies are compatible with the PNMC. To achieve the target set for 2020 regarding the reduction of greenhouse gas emissions, the decree considers, among other projects, the expansion of hydroelectric and other renewable energy supply, as well as the reduction in the annual rating of deforestation in the Amazon by 80% and in the Cerrado biome by 35%.

Brazilian states and municipalities are following the lead of the federal government by enacting regulations related to climate change. Fifteen states have enacted laws defining mechanisms to mitigate greenhouse gases and adapt to their negative effects. Some of them, such as Paraíba, São Paulo and Rio de Janeiro, have adopted voluntary targets. In the municipality of São Paulo, Municipal Law No. 14,933/2009 established a target of 30% reduction of greenhouse gas emissions in relation to the 2005 measurements. The construction sector was mentioned as one of the sectors that should focus on reaching that target.

To provide other examples, the municipality of Belo Horizonte contemplated sustainable buildings in its plan to reduce greenhouse gas emissions, while in 2007, the municipality of Rio de Janeiro created a certification called “Selo Verde,” aimed at certifying buildings considered extraordinary in terms of sustainability.

More recently, the Brazilian Nationally Determined Contribution (NDC), updated in 2023, established that Brazil must reduce its emissions by 48% by 2025 and 53% by 2030, compared to 2005 emissions.

# Renewable Energy

## Are there any regulations requiring a percentage of energy consumption to come from renewable sources?

In Brazil, most initiatives on the adoption of sustainable buildings correspond to incentives for companies that desire to pursue such path.

There is no regulation requiring a certain percentage of energy consumption to come from renewable sources, but in Brazil, power production derives mainly from hydroelectric plants. Only one-third of the energy derives from thermoelectric plants.

There are some incentives, and state and municipal laws, intending to promote the adoption of solar heating in the construction sector, but none of them imposes an obligation to adopt renewable sources. As an example, Rio de Janeiro State Law No. 5,184/2008 requires at least 40% of water heating systems in public buildings to run on solar power. In São Paulo, State Decree No. 45,765/2001 created the program for the reduction and rational use of power in the state. The decree requires that, in case of public tenders, the invitations to bid for new construction or renovations must use rational systems for power. At the municipal level, Law No. 14.459/2007 of the municipality of São Paulo requires that new buildings destined for residential and non-residential use must contain solar heating systems.

# Regulation

## What other national regulatory measures are there, such as taxes on energy consumption and/or tax reliefs on energy-saving measures, that can encourage more efficient use of energy in buildings?

Some municipalities have enacted laws to grant tax incentives on sustainable construction. In most cases, the benefits represent a reduction in the Tax on Urban Properties (IPTU), but the parameters adopted vary significantly. In the case of the municipality of São Carlos in the state of São Paulo (Municipal Law No. 13,692/2005), a reduction on the tax rate is granted if the building has trees in front or has permeable areas. In other cases, several measures lead to different reduction percentages. These measures include: (i) adoption of systems to capture rainwater; (ii) use of recycled water; (iii) implementation of solar power units; and (iv) construction with sustainable materials. These are implemented in the municipality of Seropédica in the state of Rio de Janeiro (Municipal Law No. 526/2014).

In other cases, obtaining an environmental efficiency certificate can result in a preferential evaluation during a municipality’s new building construction licensing procedure. This is the case in the cities of Rio de Janeiro under “Qualiverde” (Municipal Decree No. 35,745/2012) and of Campinas in the state of São Paulo (Municipal Supplementary Law No. 49/2013 and Municipal Decree No. 18.306/2014), where the holder of the “Selo S” will also be entitled to receive licensing fee discounts.

At the federal level, Law 12,536/2013 recently amended the Cities Ordinance Law (Law No. 10,257/2001) to promote the use of environmentally friendly operational systems, construction standards and technologies in urban buildings. The new law also allows municipalities to create incentives for the adoption of sustainable practices in the construction or renovation of buildings within their territories. Federal Law No. 10,257/01 (City’s Ordinance Law), the basic policy on the use of urban land, is a guideline for municipalities when enacting master plans.

Still at the federal level, Law No. 14.300/22, which establishes the Legal Framework for Micro and Mini-Generation of Energy, provides direct advantages for generators of energy from renewable and decentralized sources.

# Financing

## Are there any public or private “green” financing initiatives for sustainable real estate projects?

Brazil’s BNDES has special lines of financing for the construction of new buildings or the renovation of existing buildings, targeting development that is environmentally sustainable and efficient.

In addition, based on the Equator Principles, the Federation of Banks in 2009, executed the so-called Green Protocol with the Ministry of Environment, which included environmental efficiency as a criterion for banks to observe when financing projects. Most recently, Resolution No. 4.327/2014 issued by the Central Bank of Brazil obliged all banks operating in the country to create and implement a Policy of Social Environmental Responsibility. This is likely to have an impact on financing decisions.

Additionally, Banco Itaú BBA recently created green real estate credit, which can be offered by banks or financial institutions, and can be used to finance projects for the construction of new buildings, renovation of existing buildings or the purchase of properties already built that meet sustainability criteria. In this sense, Itaú works with the green entrepreneur plan, which offers differentiated financing conditions for commercial or residential projects certified with Excellence in Design for Greater Efficiencies (EDGE) from the International Finance Corporation (IFC) of the World Bank Group.

# Planning

## Is the national or local/state government able to mandate green initiatives via the planning/zoning regime (e.g., district heating systems on large developments)?

Brazilian Environmental National Policy (Federal Law No. 9.638/1981) was first established in 1981, with the enforcement of Federal Law No. 6,938/81. The law instituted environmental zoning as one mechanism to implement the environmental national policy.

For this purpose, Federal Decree No. 4,297/02 created the Ecological-Economical Zoning (ZEE). The ZEE is an instrument used to rationalize the occupation of areas and redirection of activities. It creates subvention to elaborate and execute regional plans aiming for sustainable development. It also establishes measures and standards for environmental protection aiming to ensure the environmental quality of water and soil resources, the conservation of biodiversity, and the improvement of living conditions. Therefore, the ZEE establishes guidelines for the geographical distribution of economic activities while considering the importance of the environment, as well as the limitations and fragility of the ecosystems. It also establishes prohibitions, restrictions and alternatives for the exploration of the territory.

In addition, the City’s Ordinance Law refers to the basic policy on the use of urban land. This subject was first regulated by the Federal Constitution (articles 182 and 183), which determines that the policy of urban development, executed by the local public authority, aims to command the entire development of the city’s social functions and to guarantee the inhabitants’ welfare.

The urban property fulfills its social function when it observes the demands of the city’s ordinance expressed on the Master Plan (Plano Diretor) approved by a municipal law, ensuring that sufficient attention is given to the needs of the citizens regarding the quality of life, social justice and development of economic activities. The Master Plan is the basic instrument of development and urban expansion policy.

Some state and municipal laws aim to promote certain sustainable measures that are to be adopted by buildings constructed in the referred location. As an example, in the state of Rio de Janeiro, buildings with offices of more than 50 square meters of constructed area or residential buildings for more than 50 families must be constructed with rainwater collectors (Law No. 4,393/2004). Other municipalities have enacted rules obliging the installation of individual systems of measurement of water consumption in new buildings (traditionally, the water measurement is made for the entire building and split into equal portions by the residing families).

A bill of law (PL 272/2015) in the municipality of São Paulo, the largest city in Brazil, aims to oblige new buildings and retrofits that result in an increase of the constructed area of at least 5% to observe a minimum environmental quota, which will assess the real estate’s draining capacity, vegetation coverage and other social environmental aspects to be defined by the executive.

Solid wastes resulting from construction are also broadly treated in Brazilian legislation. The regulations mainly deal with solid waste disposal and reuse and recycling terms. In the state of Rio de Janeiro, State Law No. 4.829/2006 created a plan for recycling slag.

Several laws at state and municipal levels also restrict or control the use of certain construction materials. Special attention has particularly been granted to wood. Several states and municipalities have enacted policies to control and prohibit the use of wood from sources that have not been certified.

# Green Leases

## Are green leases or green lease provisions mandatory or optional? If mandatory, to whom do they apply? If optional, is there significant take up?

In Brazil, green leases are not yet commonly used, although certain types of green clauses have already been incorporated into industrial or commercial lease agreements. However, instead of imposing sustainable practices and providing benefits for sustainable behaviors, the clauses deal mainly with the environmental responsibility of landlords. In residential leases, green clauses are still rare.

Nonetheless, the trend is to include sustainable practices in tenders promoted by governmental authorities and government-owned companies. In entering into contracts with the private sector, public authorities may require, among other things, the adoption of parameters of power efficiency and reduction of water consumption from bidders.

However, as there is not yet any mandatory requirement to include clauses regarding the environmental sustainability of the building in leases, we do not see this scenario changing in the near future.

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