BRAZILIAN WASTE & ENERGY MARKETS

The Brazilian Environment for Waste-to-Energy Development, Why is it Going to Take Off Now?

July 2020

ABREN
WtERT – Brasil

AGENDA:

01 | Waste Sector Aspects

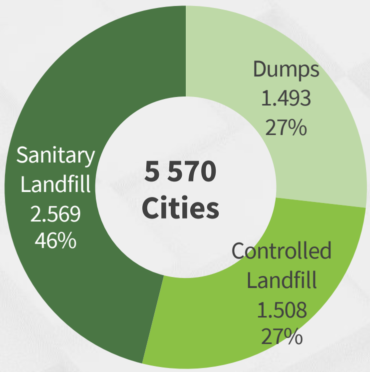
02 | Energy Sector Aspects

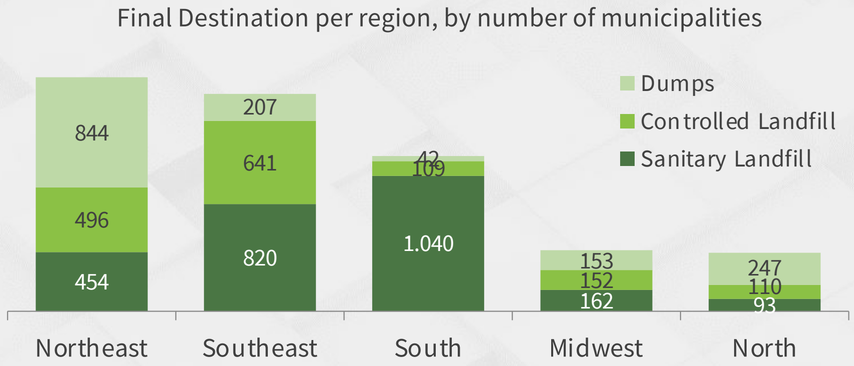
03 | Economic Aspects

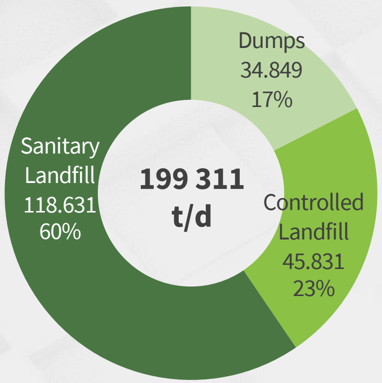
04 | Demographic Aspects

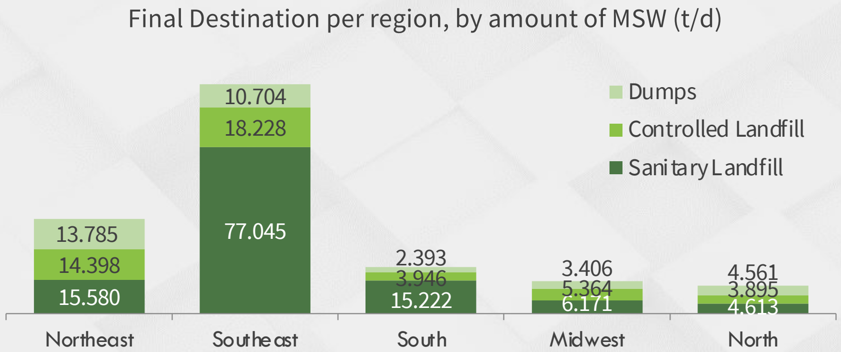
WASTE SECTOR ASPECTS

3001 cities inadequately dispose 29 million t/y of MSW (40% of total), while a new amendment to the Nation Waste Law approved in 2020 imposed new deadlines for the appropriate disposal, thus requiring new treatment methods









- The new amendment to Art. 54 of the National Solid Waste Law No. 12 305 determines that final environmentally appropriate disposal of waste **must be implemented by December 2020**, with the exception of Municipalities that don't have municipal plan:
- **- Until August 2021: Metropolitan Areas;**
- **- Until August 2022: Municipalities with more than 100.000 habitants;**
- **- Until August 2023: Municipalities between 50.000 to 100.000 habitants;**
- **- Until August 2024: Municipalities with less than 50.000 habitants.**
- This will generate significant opportunities for the adoption of treatment methods

Source: Data from « Panorama dos Residuos no Brasil 2019», Abrelpe

Approval of the legal framework for Sanitation in July 2020: PPPs and tariffs

- Law N. 14.026, 15 July of 2020: Art. 29 of Law N. 11.445:
  - § 4 In the event of provision of services under a concession regime, public tariffs and prices will be collected by the provider directly from the user, and this collection will be optional in case of fees.
- The **text facilitates the privatization of state-owned companies in the sector of basic sanitation**, without the need to count on the agreement of served municipalities, unless there are changes in the term, object or other clauses of current contract.
- It also **requires bidding for the contracting of sanitation services**, previously engaged directly with the public providers of such services.
- The new law **imposes the obligation to formalize Public Private Partnership (PPP) contracts for 30-year concessions, bringing revenue for amortization of waste-to-energy investments.**

G1 POLÍTICA

Bolsonaro sanciona com vetos novo marco legal do saneamento básico

Nova lei facilita participação da iniciativa privada no setor e tem como meta universalizar acesso ao saneamento básico. Ministério da Economia espera investimentos de até R$ 700 bilhões.

Por Guilherme Mazui e Paloma Rodrigues, G1 — Brasília
15/07/2020 13h12 · Atualizado há 15 horas

Sources: https://www.camara.leg.br/proposicoesWeb/prop_mostrarintegra?codteor=1818866&filename=Tramitacao-PRL+1+PL326119+%3D%3E+PL+3261/2019

WASTE SECTOR ASPECTS

Ongoing Law Bill to promote Energy Recovery from MSW: N. 513/2020

President of ABREN wrote the text to an important Deputy.

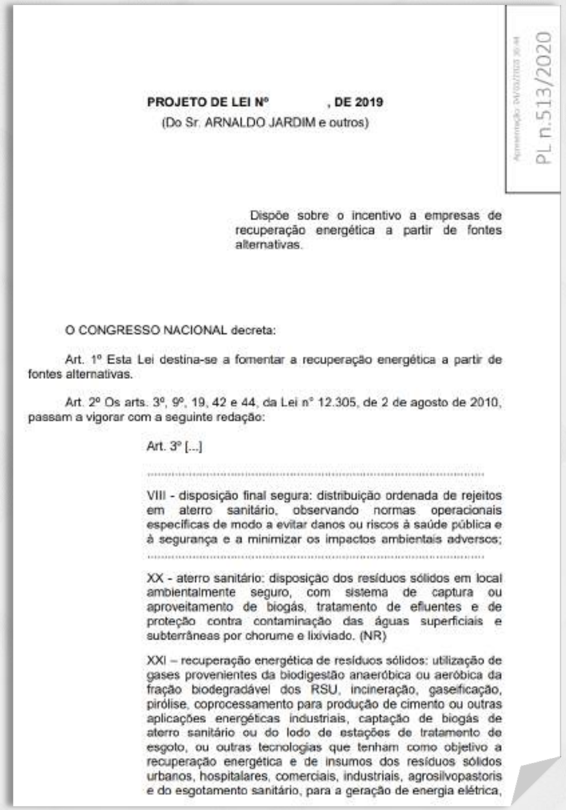
Art. 1 This Law is intended to promote energy recovery from alternative sources.

Art. 9 In the management and management of solid waste, the following order of priority must be observed: no generation, reduction, reuse, recycling, anaerobic composting, aerobic composting, thermal treatment and disposal in landfills. (NR)

- § 1 Solid waste that is **not recycled or processed through composting, in the face of technical or economic impossibility, may be used for thermal treatment**. (NR)
- § 3 Municipalities may establish a charge for a fee, tariff or other specific public price for the total or partial elimination of solid waste in the recycling and energy recovery processes, pursuant to art. 29, item II, of Law No. 11,445 / 2007. (NR)
- § 4 In the event of providing the service under a delegation regime, the **Municipalities may charge the tariff or other public price,** referred to in § 3 of this article, **on the bill for consumption of other public services,** with the consent of the service provider

Art. 36 [...]

- § 3 The amount of **biodegradable solid waste destined for landfills should be reduced by 25% of the total amount (by weight) of waste produced in 2019, by the year 2024, by 50% by the year 2027 and 75% by the year 2034**, and there should be cooperation between the government and the private sector for greater adoption of recycling and energy recovery and solid waste inputs



PL n.513/2020

PROJETO DE LEI Nº , DE 2019

(Do Sr. ARNALDO JARDIM e outros)

Dispõe sobre o incentivo a empresas de recuperação energética a partir de fontes alternativas.

O CONGRESSO NACIONAL decreta:

Art. 1º Esta Lei destina-se a fomentar a recuperação energética a partir de fontes alternativas.

Art. 2º Os arts. 3º, 9º, 19, 42 e 44, da Lei nº 12.305, de 2 de agosto de 2010, passam a vigorar com a seguinte redação:

Art. 3º [...]

....

VIII - disposição final segura: distribuição ordenada de rejeitos em aterro sanitário, observando normas operacionais específicas de modo a evitar danos ou riscos à saúde pública e à segurança e a minimizar os impactos ambientais adversos;

....

XX - aterro sanitário: disposição dos resíduos sólidos em local ambientalmente seguro, com sistema de captura ou aproveitamento de biogás, tratamento de efluentes e de proteção contra contaminação das águas superficiais e subterrâneas por chorume e lixiviado. (NR)

XXI – recuperação energética de resíduos sólidos: utilização de gases provenientes da biodigestão anaeróbica ou aeróbica da fração biodegradável dos RSU, incineração, gaseificação, pirólise, coprocessamento para produção de cimento ou outras aplicações energéticas industriais, captação de biogás de aterro sanitário ou do lodo de estações de tratamento de esgoto, ou outras tecnologias que tenham como objetivo a recuperação energética e de insumos dos resíduos sólidos urbanos, hospitalares, comerciais, industriais, agrosilvopastoris e do esgotamento sanitário, para a geração de energia elétrica,

https://www.camara.leg.br/proposicoesWeb/prop_mostrarintegra?codteor=1862527

WASTE SECTOR ASPECTS

According to the minimum targets for Landfill Diversion, as indicated in an interministerial guideline for structuring MSW management PPPs, an additional ~18 million tons of new treatment will be required over 10 years (*)

On a joint note dated 28th February 2020 on Technical and Institutional guidelines for structuring concession projects or Public-Private Partnerships related to MSW management, prepared by the Secretariat for the Promotion and Support of Federated Entities of the Special Secretariat of the Investment Partnership Program (SPPI), National Secretariat of Sanitation and the Executive Secretariat of the Ministry of Regional Development (MDR), Secretariat of Environmental Quality (MMA) and the National Health Foundation of the Ministry of Health (MS)

- *"5.4.1. **Planning of local services are under exclusive responsibility of the municipalities**, therefore, any federated support action must respect the choices about technologies and goals presented in the municipal plans, both for MSW and basic sanitation.*
- *5.4.2. In order to guide feasibility studies, in particular regarding information on local targets to be achieved for the estimation of tariffs, it is recommended that the **baseline to be considered is that which meets the minimum premises foreseen in the plans of all levels** for actions for the recycling of dry waste, the treatment of organic waste and the energy recovery of waste and landfill gases.*
- ***5.4.3. Waste Management Plans should consider the minimum targets proposed in Tables 1 and 2 as a baseline."***

Table 1 - Reduction of disposal of Dry Recyclable Waste in Landfills

Região	Meta de 5 anos	Meta de 10 anos	Meta de 15 anos	Meta de 20 anos	Meta de 25 anos
Norte	10%	13%	15%	17%	20%
Nordeste	12%	16%	19%	22%	25%
Sul	43%	50%	53%	58%	60%
Sudeste	30%	37%	42%	45%	50%
Centro-oeste	13%	15%	18%	21%	25%

Table 2 - Reduction of the disposal of Wet Solid Waste (Organic) in Landfills

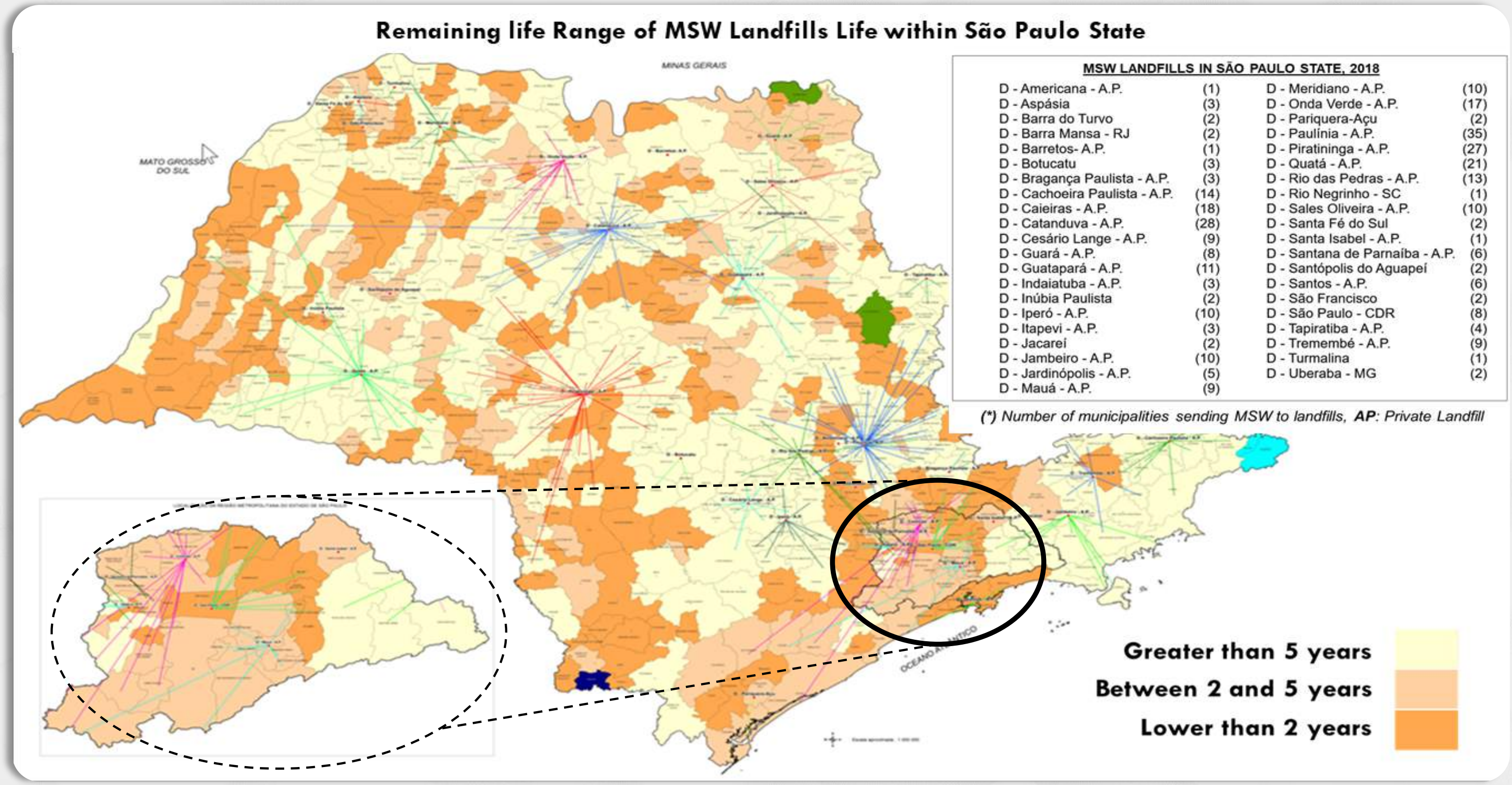
Região	Meta de 5 anos	Meta de 10 anos	Meta de 15 anos	Meta de 20 anos	Meta de 25 anos
Norte	10%	20%	30%	40%	50%
Nordeste	15%	20%	30%	40%	50%
Sul	30%	40%	50%	55%	60%
Sudeste	25%	35%	45%	50%	55%
Centro-oeste	15%	25%	35%	45%	50%

(*) Assumptions: 100M people living in metropolitan areas, MSW composed of 30% of recyclables and 50% of Organics

Source: https://www.ppi.gov.br/html/objects/_downloadblob.php?cod_blob=7128

WASTE SECTOR ASPECTS

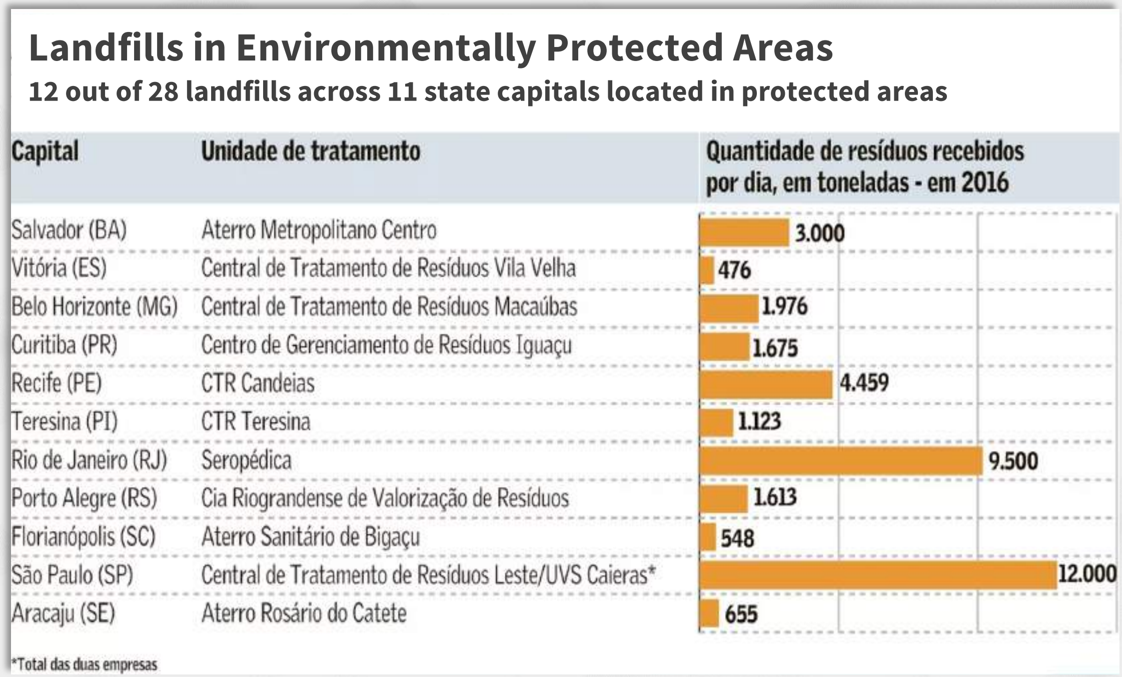
Landfills are reaching capacity limits, mainly in the states of Rio de Janeiro and São Paulo, where the majority will collapse within 3 to 5 years, requiring greater transportation distances and disposal costs



Source: State inventory of Urban Solid Waste, 2018, São Paulo state environmental company (CETESB)

WASTE SECTOR ASPECTS

In 2018, the Supreme Court banned the construction/ extension of landfills in protected areas, resulting in the search for alternative treatments for 13 million t/y of MSW due to lack of new available areas



Landfills in Environmentally Protected Areas

12 out of 28 landfills across 11 state capitals located in protected areas

Capital	Unidade de tratamento	Quantidade de resíduos recebidos por dia, em toneladas - em 2016
Salvador (BA)	Aterro Metropolitano Centro	3.000
Vitória (ES)	Central de Tratamento de Resíduos Vila Velha	476
Belo Horizonte (MG)	Central de Tratamento de Resíduos Macaúbas	1.976
Curitiba (PR)	Centro de Gerenciamento de Resíduos Iguaçu	1.675
Recife (PE)	CTR Candeias	4.459
Teresina (PI)	CTR Teresina	1.123
Rio de Janeiro (RJ)	Seropédica	9.500
Porto Alegre (RS)	Cia Riograndense de Valorização de Resíduos	1.613
Florianópolis (SC)	Aterro Sanitário de Bigaçu	548
São Paulo (SP)	Central de Tratamento de Resíduos Leste/UVS Caieras*	12.000
Aracaju (SE)	Aterro Rosário do Catete	655

*Total das duas empresas

Source: https://valor.globo.com/empresas/noticia/2020/03/04/aterros-sanitarios-de-onze-capitais-podem-se-tornar-ilegais.ghtml+&cd=2&hl=en&ct=clnk&gl=fr; http://redir.stf.jus.br/paginadorpub/paginador.jsp?docTP=TP&docID=750504737

- *"Regarding permission to intervene in a permanent preservation area for waste management, the risks of contamination of the soil, groundwater and water courses impose a declaration of unconstitutionality of the permissive on canvas, considering the use of biological and chemical contaminants that are inherent in the installation and operation of landfills. "*
- *"Permission to intervene in the Permanent Preservation Area - APP for the installation of landfills is not reasonable, and other places must be sought to install them"*

AGENDA:

01 | *Waste Sector Aspects*

02 | Energy Sector Aspects

03 | *Economic Aspects*

02 | *Demographic Aspects*

ENERGY SECTOR ASPECTS

The Energy Research Agency (EPE) as estimated a potential of 3.2 GWe of WTE installed capacity, equivalent to 2,4% of the country's capacity or 5,4% of the electricity demand. This would represent 106 WTE plants of 30 MWe

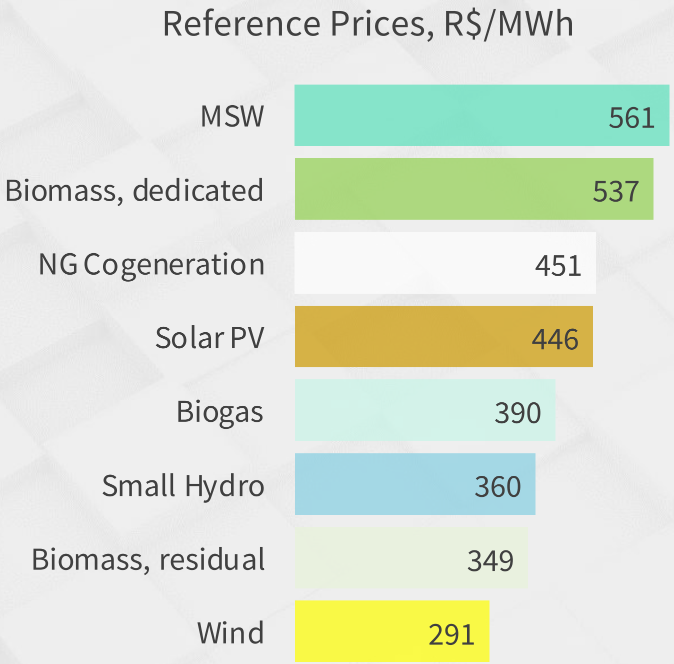
Estimation of Power Capacity from MSW

Plant Type	Capacity, MWe	Units of 30 MWe
WTE Power Capacity, Brazil	**3 176**	**106**
In relation to Country's Capacity	*2,4%*	
WTE Power Capacity, Metropolitan Regions	*2 400*	**80**
In relation to Country's Capacity	*1,85%*	

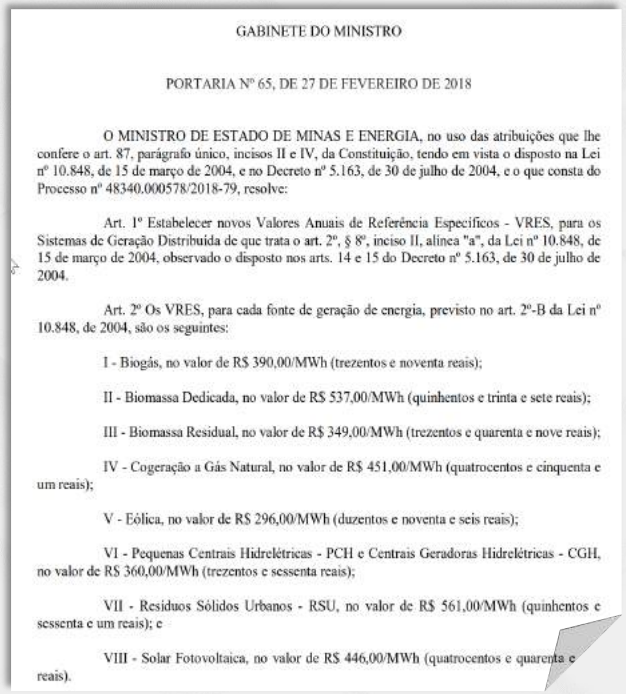
Source: Energy Research Agency (EPE), Mininstry of Energy, 2014

ENERGY SECTOR ASPECTS

MME Ordinance 65/2018 defined the reference values (reviewed annually) for contracting of several sources under the distributed generation system (up to 30 MWe), including from MSW with reference value of 561 R$/MWh (to be adjusted over years) – U$ 115,00



- With the ordinance, energy distributors can define in their public calls the energy source that best meets their needs (generation profile compatible with load curve or projects located close to load centers), with the objective to encourage reduction of greenhouse gases;
- Currently, distribution concessionaires can acquire up to 10% of the total amount of energy contracted through their own auctions, as long as the reference values of the regulated market are respected;
- Auctions are promoted directly by the distributor and intended for projects that connect directly to the buyer's distribution system, including WTE plants.



GABINETE DO MINISTRO

PORTARIA Nº 65, DE 27 DE FEVEREIRO DE 2018

O MINISTRO DE ESTADO DE MINAS E ENERGIA, no uso das atribuições que lhe confere o art. 87, parágrafo único, incisos II e IV, da Constituição, tendo em vista o disposto na Lei nº 10.848, de 15 de março de 2004, e no Decreto nº 5.163, de 30 de julho de 2004, e o que consta do Processo nº 48340.000578/2018-79, resolve:

Art. 1º Estabelecer novos Valores Anuais de Referência Especificos - VRES, para os Sistemas de Geração Distribuida de que trata o art. 2º, § 8º, inciso II, alinea "a", da Lei nº 10.848, de 15 de março de 2004, observado o disposto nos arts. 14 e 15 do Decreto nº 5.163, de 30 de julho de 2004.

Art. 2º Os VRES, para cada fonte de geração de energia, previsto no art. 2º-B da Lei nº 10.848, de 2004, são os seguintes:

I - Biogás, no valor de R$ 390,00/MWh (trezentos e noventa reais);

II - Biomassa Dedicada, no valor de R$ 537,00/MWh (quinhentos e trinta e sete reais);

III - Biomassa Residual, no valor de R$ 349,00/MWh (trezentos e quarenta e nove reais);

IV - Cogeração a Gás Natural, no valor de R$ 451,00/MWh (quatrocentos e cinquenta e um reais);

V - Eólica, no valor de R$ 296,00/MWh (duzentos e noventa e seis reais);

VI - Pequenas Centrais Hidrelétricas - PCH e Centrais Geradoras Hidrelétricas - CGH, no valor de R$ 360,00/MWh (trezentos e sessenta reais);

VII - Resíduos Sólidos Urbanos - RSU, no valor de R$ 561,00/MWh (quinhentos e sessenta e um reais); e

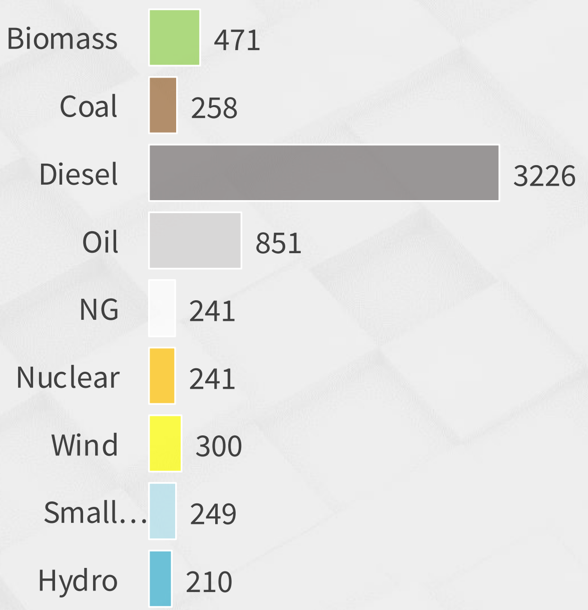
VIII - Solar Fotovoltaica, no valor de R$ 446,00/MWh (quatrocentos e quarenta e reais).

Source: MME Ordinance No. 65, 28 published on 28th Feb. 2018

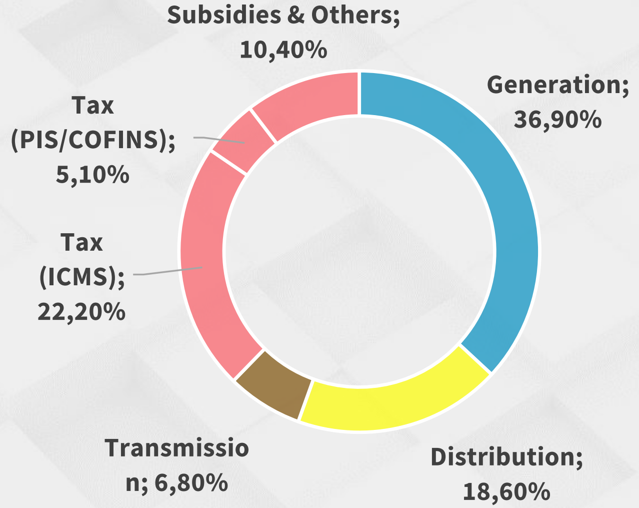
ENERGY SECTOR ASPECTS

The generation cost in the final tariff accounts for 37% (less than 38% of charges and taxes) and adoption (in reasonable proportions) of more costly sources through distributed generation will have a minor impact on final prices

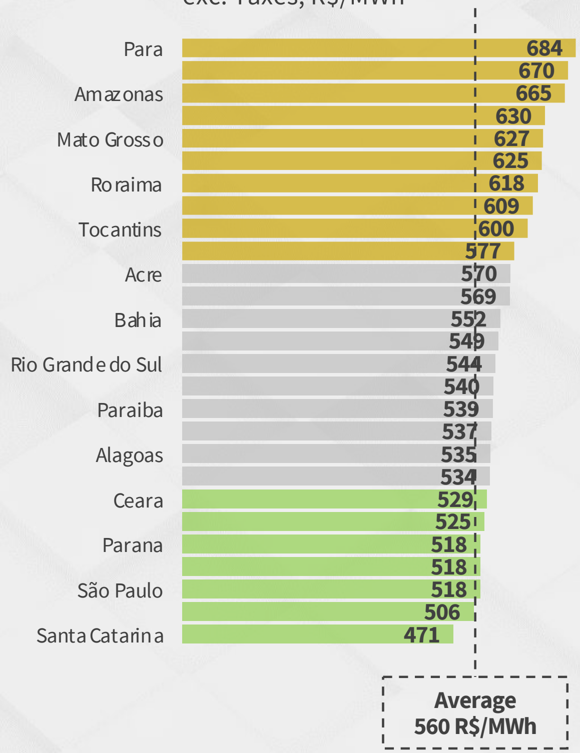
Levelized Cost of Power Generation, Avg. 2015-2019, R$/MWh



Composition of Total Cost of Electricity, 2018



Tariffs charged by main distributors, exc. Taxes, R$/MWh



Source: ENGENHO, Câmara de Comercialização de Energia Elétrica and ANEEL, 2020

AGENDA:

01 | Waste Aspects

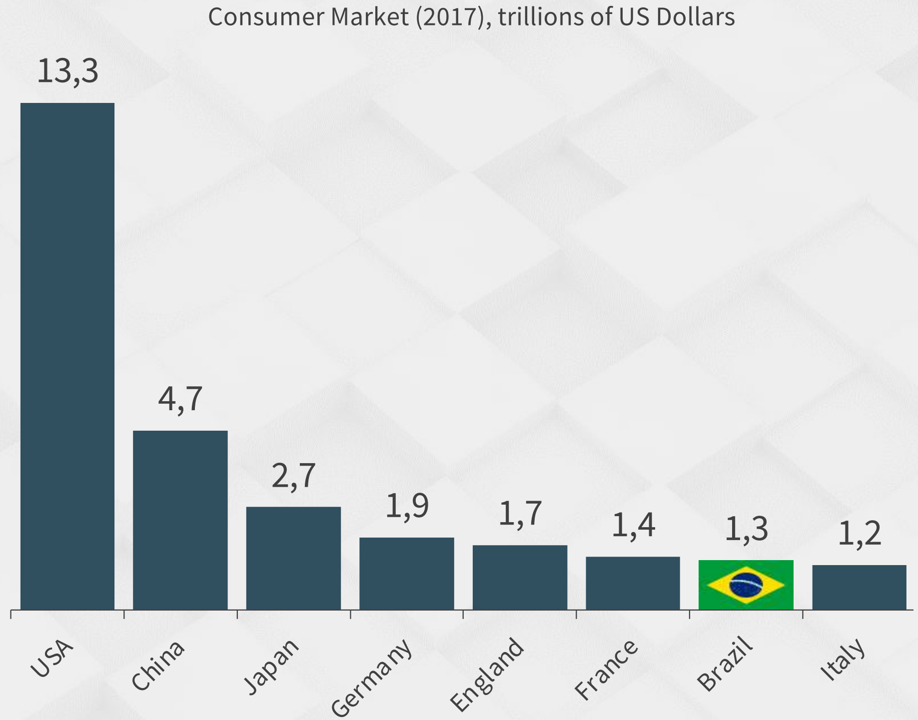
02 | Energy Sector Aspects

03 | Economic Aspects

04 | Demographic Sector Aspects

ECONOMIC ASPECTS

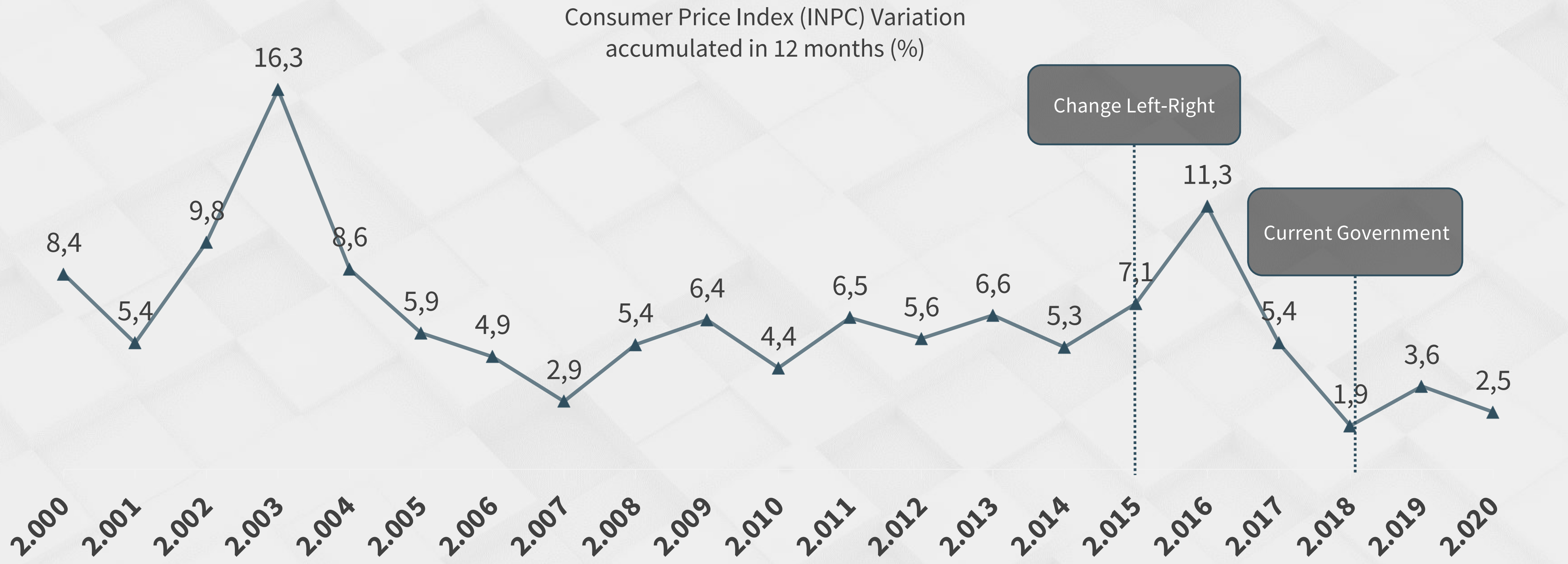
Brazil was the 7th world's largest GDP in 2019 with 3.5 trillion USD in Power Purchase Parity and the 7th largest consumer market worldwide



Source: World Bank, 2019-2017

ECONOMIC ASPECTS

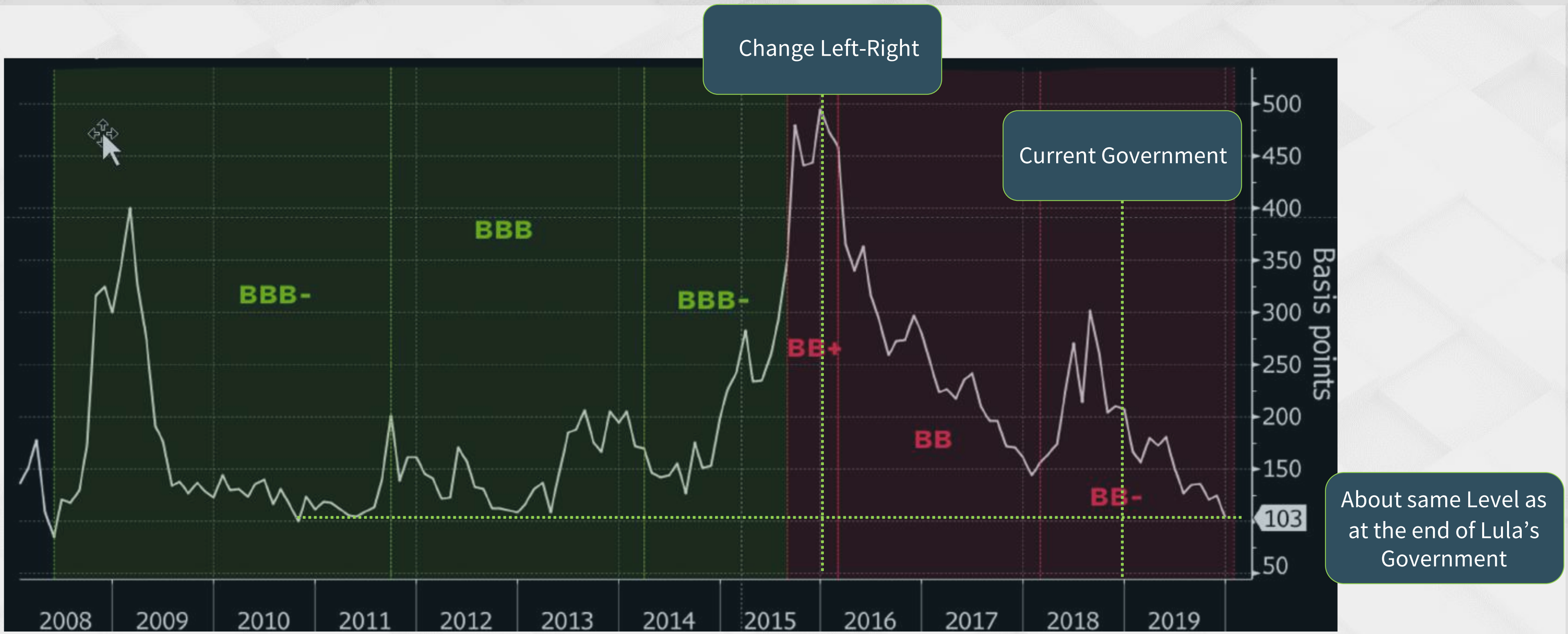
12-m cumulated Inflation Rate is currently at **2,5%**, 2nd lowest historic level and down from 11,3% in 2016



Source: IBGE - National Consumer Price Index, https://sidra.ibge.gov.br/tabela/1736#resultado

ECONOMIC ASPECTS

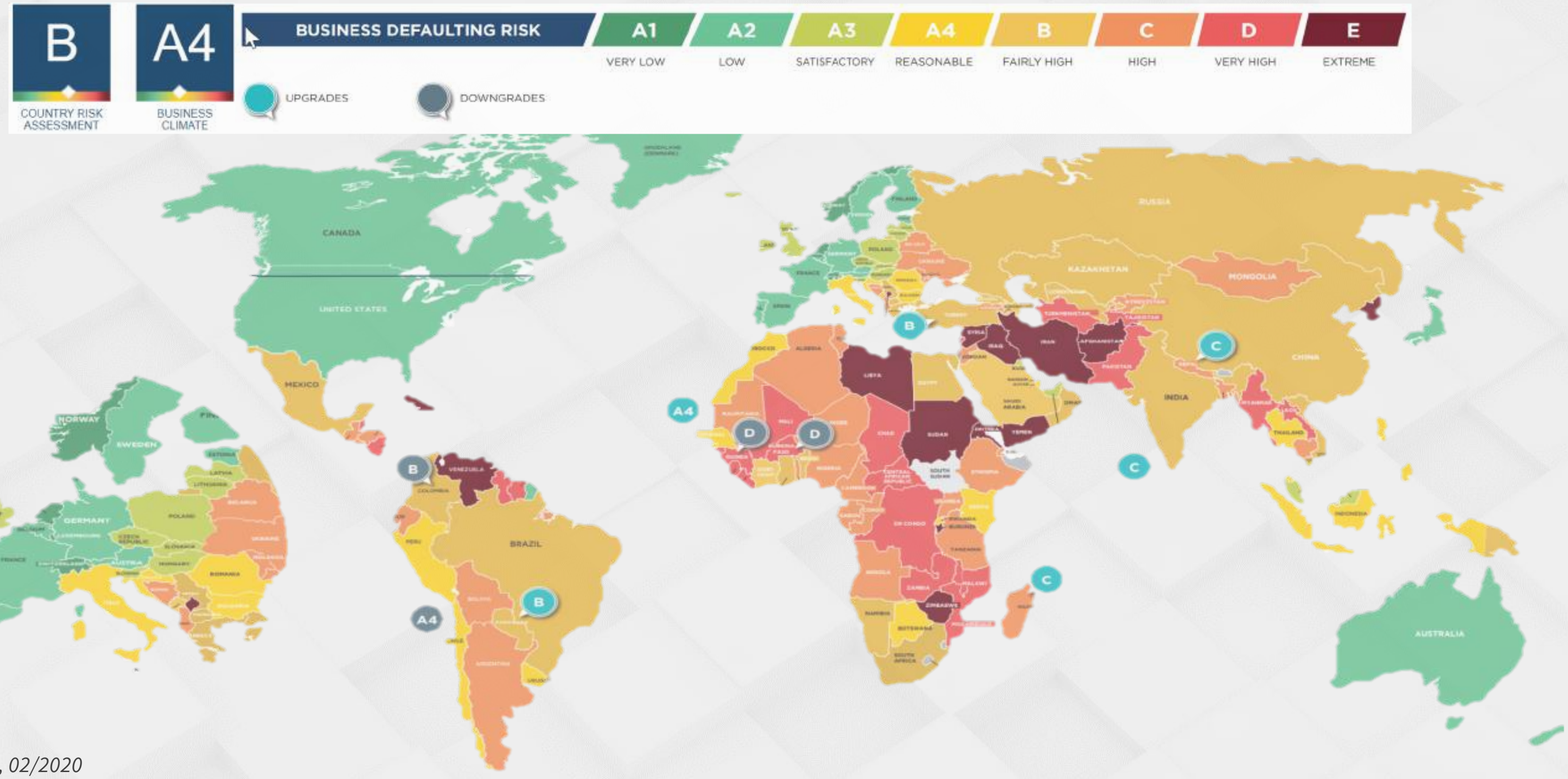
By the end of 2019 Brazil's Sovereign 5-y Credit Default Swaps were traded at lowest since 2013, reaching about same level as end of Lula's Government



Source: Bloomberg, https://www.bloomberg.com/news/articles/2019-12-12/a-step-closer-to-upgrade-brazil-cds-falls-to-lowest-since-2013

ECONOMIC ASPECTS

Current Country Risk Rating by COFACE (B) is similar to most of developing countries in Asia, Middle-East and Latin America



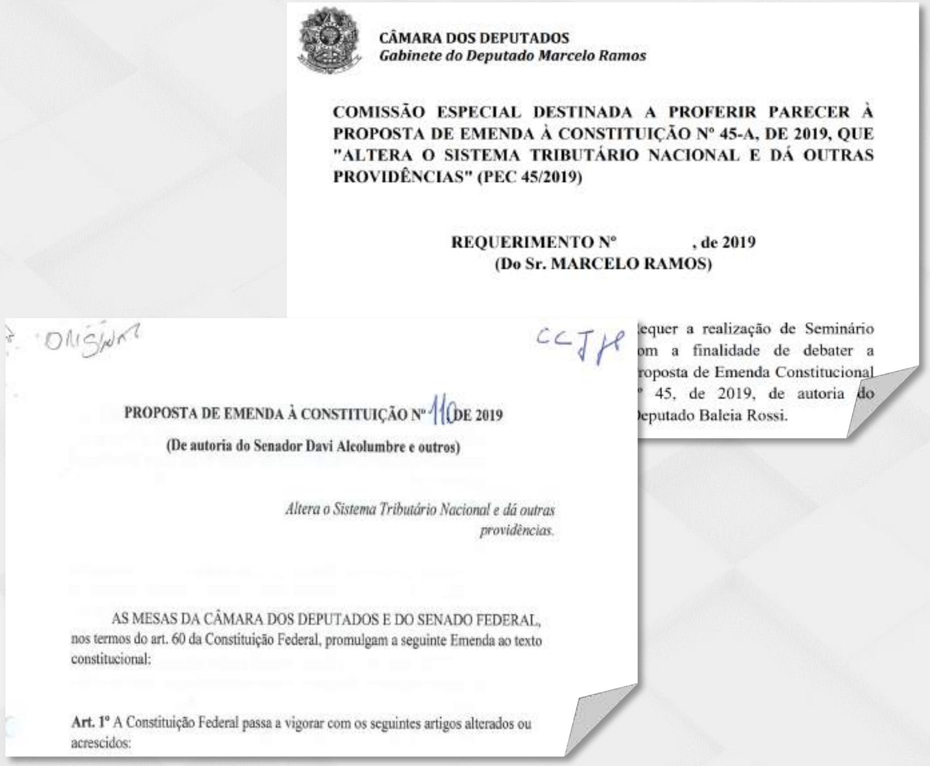
Source: COFACE, 02/2020

ECONOMIC ASPECTS

Government has made tax reform a top priority and is considering several tax reform measures, of which the simplification and reduction of Corporate Tax from current's 34% rate to 20%-25%

Various proposals are being discussed, the two main ones being the Constitutional Amendments PEC No. 45/19 (House of Representatives) and PEC No. 110/19 (Senate), both currently under review. These two amendments could significantly impact the taxation of goods, services, social security and corporate profits in Brazil. The key features of these Amendments with far-reaching implications are:

- Simplification of the system by replacing five taxes (IPI, PIS, Cofins, ICMS, ISS) with a single VAT (Value Added Tax) type Tax on Goods and Services (IBS).
- Combination of the two existing income taxes (IRPJ and CSLL) into a single, unified corporate income tax;
- Reduction of the standard Brazilian overall tax burden from 34% to approximately 20%-25%;
- Introduction of a withholding tax regime on dividends with possible tax rates varying from 15%, 18% and 25%.



CÂMARA DOS DEPUTADOS
Gabinete do Deputado Marcelo Ramos

COMISSÃO ESPECIAL DESTINADA A PROFERIR PARECER À PROPOSTA DE EMENDA À CONSTITUIÇÃO Nº 45-A, DE 2019, QUE "ALTERA O SISTEMA TRIBUTÁRIO NACIONAL E DÁ OUTRAS PROVIDÊNCIAS" (PEC 45/2019)

REQUERIMENTO Nº , de 2019
(Do Sr. MARCELO RAMOS)

...equer a realização de Seminário ...om a finalidade de debater a ...roposta de Emenda Constitucional ...º 45, de 2019, de autoria do ...eputado Baleia Rossi.

PROPOSTA DE EMENDA À CONSTITUIÇÃO Nº 110 DE 2019
(De autoria do Senador Davi Alcolumbre e outros)

Altera o Sistema Tributário Nacional e dá outras providências.

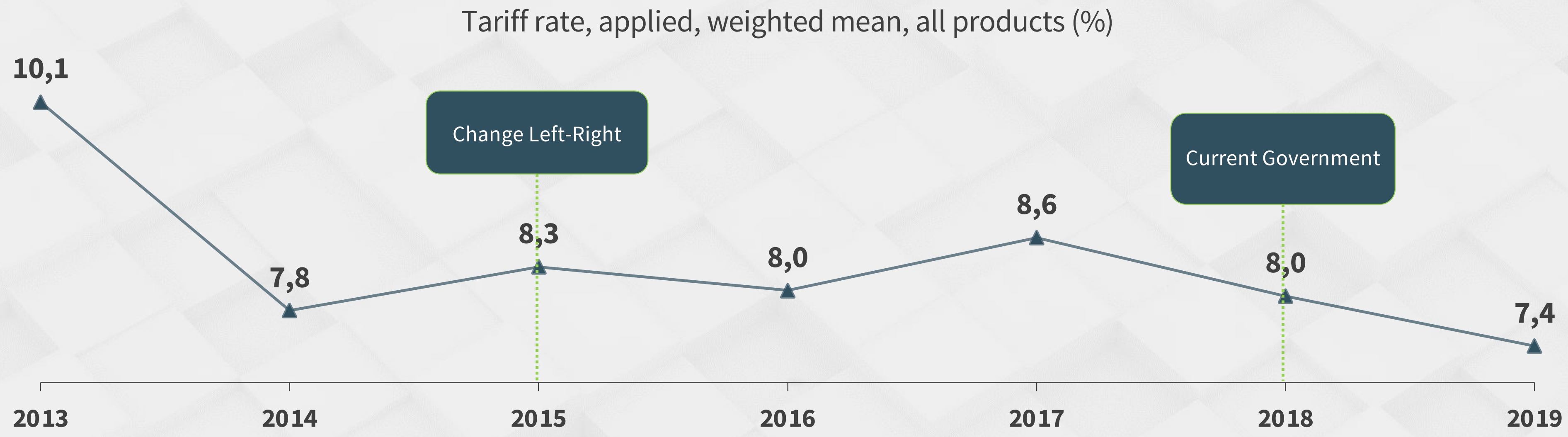
AS MESAS DA CÂMARA DOS DEPUTADOS E DO SENADO FEDERAL, nos termos do art. 60 da Constituição Federal, promulgam a seguinte Emenda ao texto constitucional:

Art. 1º A Constituição Federal passa a vigorar com os seguintes artigos alterados ou acrescidos:

Sources: news.bloombergtax.com/daily-tax-report-international/insight-brazilian-tax-reform-key-considerations-for-u-s-multinationals, www.camara.leg.br, www12.senado.leg.br/

ECONOMIC ASPECTS

Average Import duties have decreased from 10% in 2013 to 7,4% in 2019 and Government is further facilitating the import of several machines & equipment (at 0% rate) for the Brazilian industry, inc. for Waste Treatment



The Special Secretariat for Foreign Trade and International Affairs of the Ministry of Economy announced in the Official Gazette on 20th August 2019, by the Decree No. 531, the reduction until December 2021 of the rates of the Import Tax on Capital Goods, including several machines, equipment and technology (at 0% import duties) for the Brazilian industry.

Sources; The World Bank, https://data.worldbank.org/indicator/TM.TAX.MRCH.WM.AR.ZS?locations=BR
http://www.in.gov.br/en/web/dou/-/portaria-n-531-de-20-de-agosto-de-2019-212644893

ECONOMIC ASPECTS

Loans by The National Development Bank under the "Environmental Sanitation" line with maturity up to 34 years, financing of up to 95% of total investment and reduced spreads (all-in debt rate within 6-8%)

BNDES Finem - Environmental sanitation and water resources

Financing from R $ 10 million for public or private investment projects aimed at universal access to basic sanitation services and the recovery of environmentally degraded areas.

Deadlines

The maximum financing term is 34 years. This term comprises the grace period and the amortization period and is determined according to the payment capacity of the project, the client and the economic group.

During the grace period, which will be up to six months after the project enters commercial operation, interest may be capitalized or paid by the client.

BNDES participation

For states and municipalities, up to 90% of the total value of the project, limited to 100% of the financeable items.
For other clients, up to 95% of the total value of the project, limited to 100% of the financeable items.

Interest rate

Direct support (request made directly to BNDES)

In direct operations, the **interest rate** is composed of the **financial cost** , **the BNDES remuneration** and the **credit risk rate** . Understand .

	Companies		
FINANCED ITEMS	Financial cost	BNDES remuneration	Credit risk rate
Solid waste and sewage treatment	TLP	0.9% per year (aa)	Variable according to client risk and financing terms
Other investments		1.3% per year (aa)	

Indirect support (request made through a financial institution accredited by BNDES)

In indirect operations, the **interest rate** is composed of the **financial cost** , **the BNDES fee** and **the financial agent fee** . Understand .

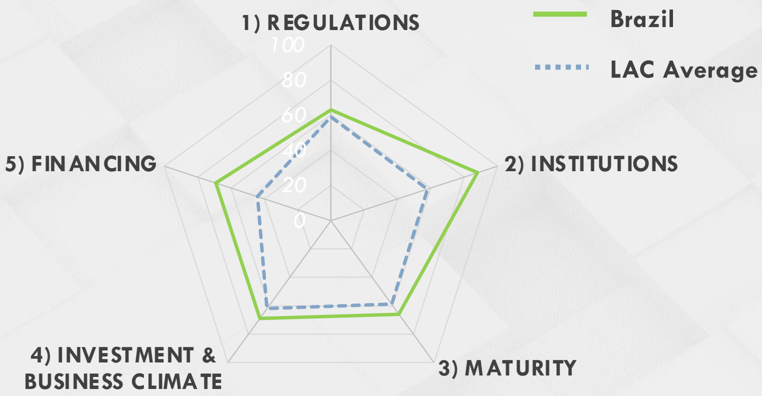
FINANCED ITEMS	Financial cost	BNDES rate	Financial agent fee
Solid waste and sewage treatment	TLP	1.05% per year (aa)	Negotiated between the institution and the client
Other investments		1.45% per year (aa)	

Source: Brazilian National Development Bank (BNDES), 2020

ECONOMIC ASPECTS

According to The 2019 Infrascope, Brazil is considered as a Developed market for Public-Private Partnerships having scored above the average of all LAC countries in all categories

Category	Score / 100	LAC average
OVERALL SCORE	71	57
1) Regulations	63	59
2) Institutions	88	58
3) Maturity	66	59
4) Investment & Business Climate	69	62
5) Financing	69	44

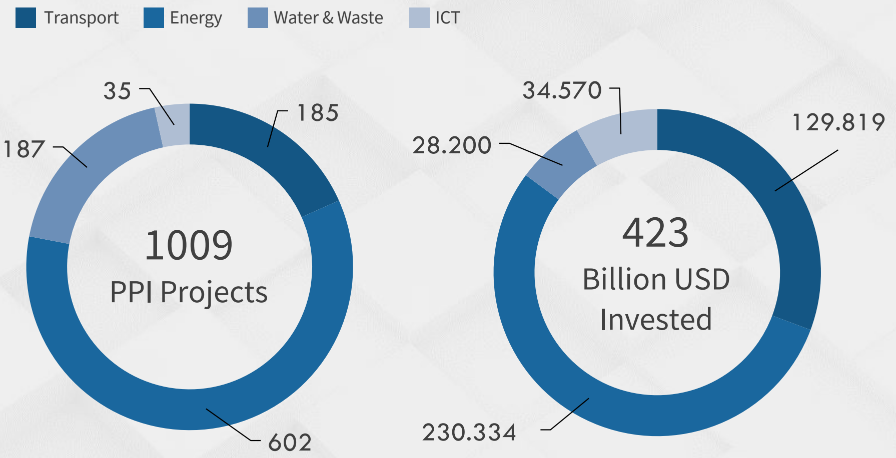


Source: The 2019 Infrascope, The Economist Intelligence Unit/IADB

ECONOMIC ASPECTS

Brazil has awarded 1009 PPP infrastructure projects since 1990 for a total investment of 423 bn USD, of which 583 projects (58%) and 192 bn USD (45%) during the last decade

- Brazil's comprehensive PPP framework consists of two main laws. The first is the 1995 Concessions Law (No. 8,987) and the second is the 2004 PPP Law (No. 11,079) which enables all levels of government to implement PPPs across all infrastructure sectors and defines the most relevant rules for a stable PPP environment.
- An economic crisis in 2014 and corruption investigations in 2016 precipitated an abrupt restructuring of the Brazilian PPP market, favouring the entry of medium-sized construction companies and international participation as larger construction companies implicated in the scandals have exited the market
- Since then, the PPP environment in Brazil has evolved positively with the creation of the Investment Partnerships Programme in 2016 and the Project Support Fund in 2017, demonstrating political support for private investment in infrastructure and allowing improvement of PPPs' quality under an experienced team :
  - diversification of type of assets and services delivered;
  - leading role of municipal governments (responsible for water, sanitation and local roads), increasing pipeline of projects;
  - provision of technical and financial assistance to municipalities;
  - longer bidding timelines and publication also in English.
- Brazil has the largest PPP market by far in Latin America, representing a 50% of the total number of projects and a 45% of the total investment volume in the continent. Investment commitments in LAC have almost doubled from 2018, driven largely by a surge in Brazil, which accounted for two third of the regional investment at 18.6 billion USD.
- Since implementation of new rules a total of 124 projects worth around 68 bn USD have been completed and an additional 25 PPPs were in the pipeline during the first trimester of 2019.



Sources: Private Participation in Infrastructure (PPI) - World Bank Group and The 2019 Infrascope, The Economist Intelligence Unit/IADB

ECONOMIC ASPECTS

The 2019 EU-Mercosur trade agreement shall allow EU Companies to benefit from the cutting of tariffs, accessing to public contracts, easier customs procedures and setting up business presence

CUTTING TARIFS

- The agreement will eliminate high customs duties in key EU export sectors, including machinery;
- The EU will be the first major trading partner to conclude a trade agreement with the Mercosur bloc, giving EU companies much better access to its market than it gives to businesses from other countries.
- With the elimination of tariffs, many European companies already established in the region will be easily import parts and goods

GETTING ACCESS TO PUBLIC CONTRACTS

- The agreement will allow EU firms to bid for public contracts on equal terms with Mercosur companies.
- So far, this market (not part to the plurilateral Government Procurement Agreement) was mostly closed to EU companies and has not given access to its public tenders to any third countries

EASIER CUSTOMS AND COMPLIANCE PROCEDURES

- The two sides will simplify their customs procedures and work together more closely on technical regulations and standards, so that any existing differences may not stop EU companies from exporting.

SELLING SERVICES AND SETTING UP A BUSINESS PRESENCE

- Mercosur countries have thus far given limited access to services providers from other World Trade Organization (WTO) countries, but EU companies are already involved in providing Mercosur with a variety of services.
- The agreement will address many significant barriers they face and will also help other companies seeking to provide services or set up a service or manufacturing business in a country of Mercosur. They will enjoy greater legal certainty and a level playing field

SUPPORTING SMALL AND MEDIUM-SIZED COMPANIES

- Small and medium-sized companies often cannot afford entering new export markets due to red tape at customs, costly testing and certification requirements. In many cases, this adds to a lack of knowledge of regulatory requirements and processes to place their products on the export market.
- Thanks to the agreement, they will now benefit from a new online platform providing easy access to information on market requirements and customs rebates.

Source: Key elements of the EU-Mercosur trade agreement, https://ec.europa.eu/commission/presscorner/detail/en/QANDA_19_3375

ECONOMIC ASPECTS

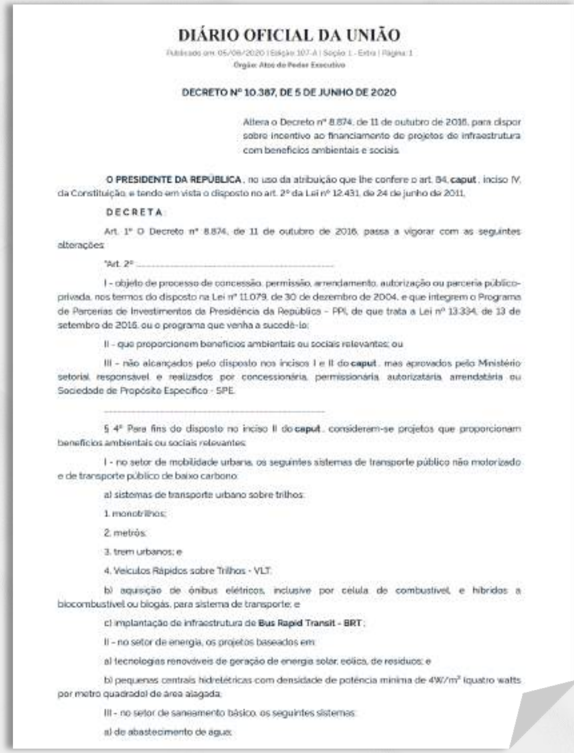
Brazilian Government introduced a Green Debentures Programme for Waste to Energy projects through Decree 10.387 from 5th June 2020

- With a Green Debentures Programme, the Government of Brazil plans to introduce channel funding towards renewable energy projects, including Waste-to-Energy.

- A corresponding decree has recently been signed by the president. The funds will be made available through so-called green debentures.

- Decree nº 10,387 benefits the construction of WTE plants, since it creates new mechanisms for issuing green debentures. The objective is to finance infrastructure projects that bring relevant environmental or social benefits.

- The new decree promotes the implementation of new renewable energy sources, creating more favorable conditions for obtaining financing for the construction of plants powered by MSW.



DIÁRIO OFICIAL DA UNIÃO

Publicado em: 05/06/2020 | Edição: 107-A | Seção: 1 - Extra | Página: 1

Órgão: Atos do Poder Executivo

DECRETO Nº 10.387, DE 5 DE JUNHO DE 2020

Altera o Decreto nº 8.874, de 11 de outubro de 2016, para dispor sobre incentivo ao financiamento de projetos de infraestrutura com benefícios ambientais e sociais.

O PRESIDENTE DA REPÚBLICA, no uso da atribuição que lhe confere o art. 84, **caput**, inciso IV, da Constituição, e tendo em vista o disposto no art. 2º da Lei nº 12.431, de 24 de junho de 2011,

DECRETA:

Art. 1º O Decreto nº 8.874, de 11 de outubro de 2016, passa a vigorar com as seguintes alterações:

"Art. 2º ....

I - objeto de processo de concessão, permissão, arrendamento, autorização ou parceria público-privada, nos termos do disposto na Lei nº 11.079, de 30 de dezembro de 2004, e que integrem o Programa de Parcerias de Investimentos da Presidência da República - PPI, de que trata a Lei nº 13.334, de 13 de setembro de 2016, ou o programa que venha a sucedê-lo;

II - que proporcionem benefícios ambientais ou sociais relevantes; ou

III - não alcançados pelo disposto nos incisos I e II do **caput**, mas aprovados pelo Ministério setorial responsável e realizados por concessionária, permissionária, autorizatária, arrendatária ou Sociedade de Propósito Específico - SPE.

....

§ 4º Para fins do disposto no inciso II do **caput**, consideram-se projetos que proporcionam benefícios ambientais ou sociais relevantes:

I - no setor de mobilidade urbana, os seguintes sistemas de transporte público não motorizado e de transporte público de baixo carbono:

a) sistemas de transporte urbano sobre trilhos:

1. monotrilhos;

2. metrôs;

3. trem urbanos; e

4. Veículos Rápidos sobre Trilhos - VLT;

b) aquisição de ônibus elétricos, inclusive por célula de combustível, e híbridos a biocombustível ou biogás, para sistema de transporte; e

c) implantação de infraestrutura de **Bus Rapid Transit - BRT**;

II - no setor de energia, os projetos baseados em:

a) tecnologias renováveis de geração de energia solar, eólica, de resíduos; e

b) pequenas centrais hidrelétricas com densidade de potência mínima de $4W/m^2$ (quatro watts por metro quadrado) de área alagada;

III - no setor de saneamento básico, os seguintes sistemas:

a) de abastecimento de água;

Source: Authors

AGENDA:

01 | *Waste Sector Aspects*

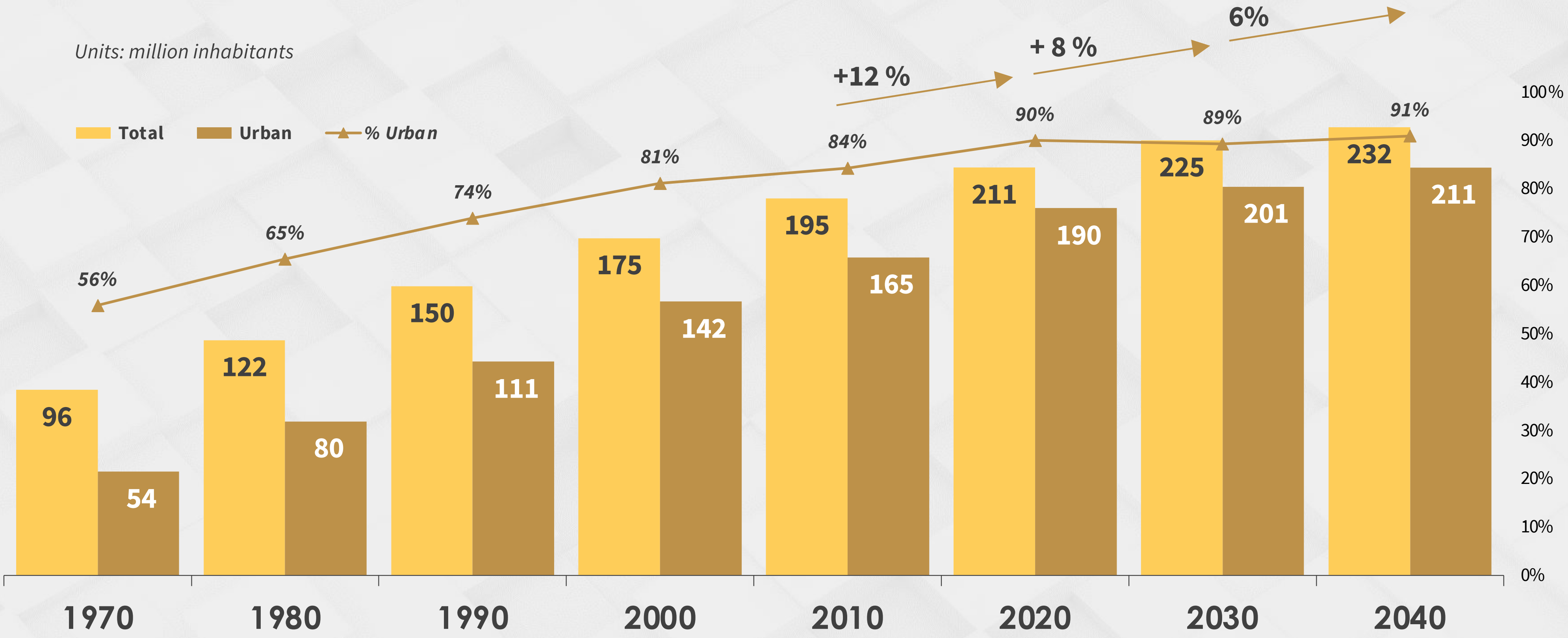
02 | *Energy Sector Aspects*

03 | *Economic Aspects*

04 | Demographic Aspects

DEMOGRAPHIC ASPECTS

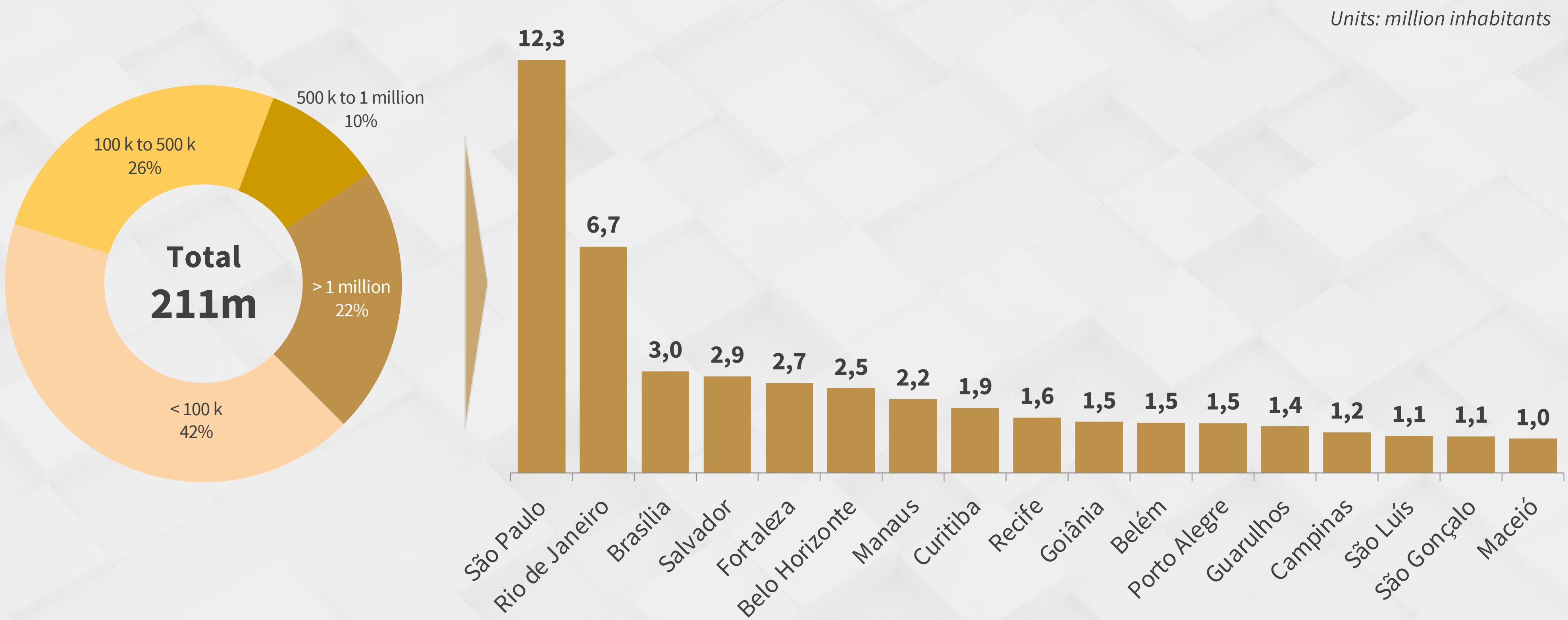
Population of 211 million people is projected to reach 225 million by 2030 (average growth of 0,8% per year), of which 90% living in urban areas



Source: Data from the Brazilian Institute of Geography and Statistics (IBGE)

DEMOGRAPHIC ASPECTS

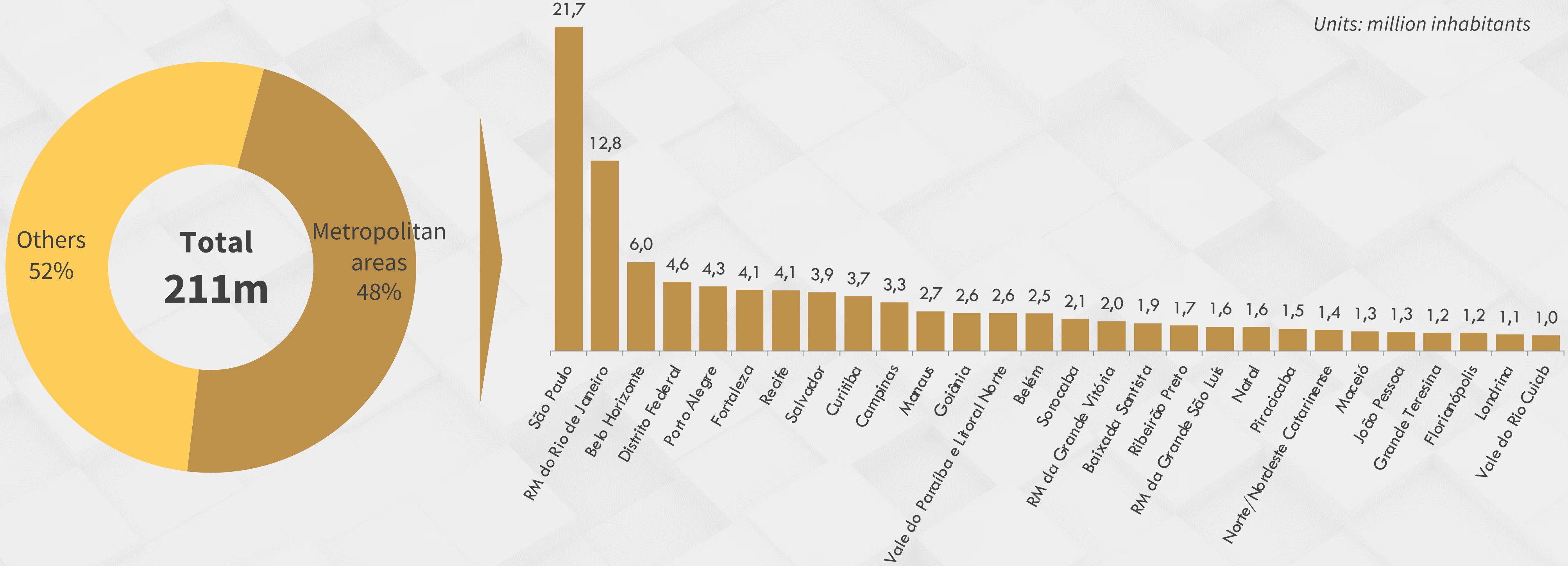
67 million people (32% of country's population) are living in 48 municipalities with over 500 thousand people in 2020, of which 17 municipalities with over 1 million inhabitants



Source: Data from the Brazilian Institute of Geography and Statistics (IBGE)

DEMOGRAPHIC ASPECTS

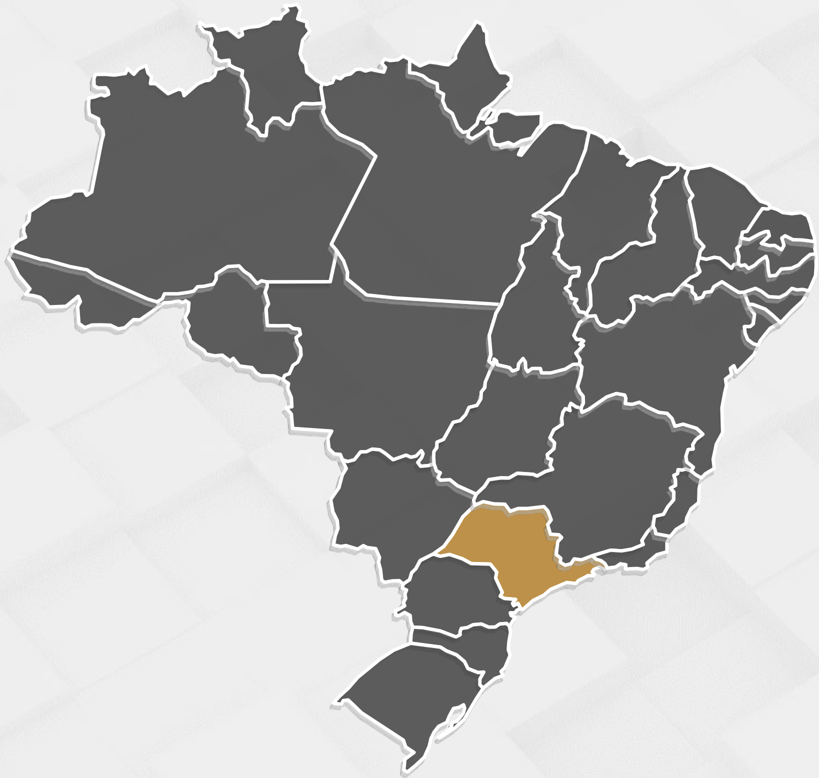
100 million people (48% of the population) are living in 28 metropolitan areas with more than 1 million inhabitants



Source: Data from the Brazilian Institute of Geography and Statistics (IBGE)

DEMOGRAPHIC ASPECTS

High concentration of Population in São Paulo State with 46 million people (22% of country’s total), of which 22 million people in São Paulo metropolitan region and 12 million in São Paulo city alone



São Paulo

- State Population: 46 million (22% of country’s total)
- Metropolitan Region Population: 22 million
- City Population: 12 million
- 6 Metropolitan regions with population greater than 1.5 million (total of 32 million)
- 17 cities with population greater than 400k people

Source: Data from the Brazilian Institute of Geography and Statistics (IBGE)


ABREN
WtERT – Brasil

ABREN CONTRIBUTIONS

Proposals for dedicated/exclusive regulated auctions

- Promotion of studies with the Energy Research Agency (EPE) with the purpose of instructing a dedicated auction to contract from WTE plants;
- Definition of a date for the auction to be held (suggestion for May 2021) , with prior publication at least 10 months;
- Proposals for public call priority for metropolitan regions (WTE above 600 t/d)
- It is estimated that 200 MW of installed power should be contracted from WTE.

Amendment of Ordinance 65/2018 (distributed generation)

- Only from thermal treatment and anaerobic biodigestion.
- Change the maximum installed capacity per project to be contracted from 30 to 120 MW;
- Obligation distributors contract up to 1% of demand from WTE;
- Annual public calls and exemption from exposure when over contracted;
- Reference Ceiling price of 600 R$/MWh – U$ 115,00.

Preferential opening of the free market

- Ideal for small and medium-sized municipalities (25 -150 t/d): gasification and pyrolysis
- Preferential opening from 2021 for WTE plants;
- Only for commercial, industrial and public service companies: 0.2% of total consumption, total load around 2 GW;

Implementation of Concession of PPPs and tariff system for MSW management

- ABREN contributed to the approval in 2020 of the new Legal Framework for Sanitation (Law N. 14.026), obliging the formalization of Public Private Partnership (PPP) contracts for 30-year concessions, defending the extinction of the Public Cleaning Fee (TLP) charged together with the Urban Property and Land Tax (IPTU), while creating of a tariff for solid waste management that can be collected by the provider directly from users on electricity or water bills.

Encourage companies to adhere to the EU'S Circular Economy Plan, which will require certification for adequate disposal of MSW, landfills not being included

- Companies will be forced to adopt recycling and energy recovery through heat treatment or anaerobic digestion if they want their products to be certified and better accepted by the EU Community

ABREN CONTRIBUTIONS

Development of a proposal to the Presidency to implement a national plan for sustainable waste management

- Organization and coordination of the performance of the portfolios involved in the waste sector, in addition to promoting a federal standard to facilitate licensing of WTE plants by the States
- The operation of thermal treatment plants is regulated by Interministerial Ordinance No. 274/2019, signed by MME, MDR and MMA. The standard, related to the emissions and operation aspects, allows MSW thermal treatment but CONAMA has not yet regulated the federal licensing of such plants, leaving it up to each State. So far only the State of São Paulo has implemented such standard through SMA Ordinance No. 79/2009.
- Letter sent to the Presidency with several guidelines to be followed and awaits effective appreciation and deliberation in this regard.

Establishment of Interministerial working groups by Government

- WTE has been qualified by the Investment Partnerships Program, through Decree No. 10117 / 2019, providing for the creation of an Interministerial Committee, with representatives from the Civil House, the Ministry of the Environment (Secretariat of Environmental Quality) and the Ministry of Regional Development (National Secretariat of Sanitation). ABREN is working to include the representation of the Ministry of Mines and Energy to vote on the decisions that will qualify WTE plants in the context of the PPI Program, since it has not yet been contemplated with express participation and voting right.

Increase population awareness and promote academic training, research & development on waste management

- Raising the population's awareness of the importance of sustainable MSW management to alleviate the environmental problems inherent in inadequate disposal, through MSW reduction, reuse, recycling, composting and energy recovery.
- Promotion of seminars, courses, publications and chairs at universities, given the lack of local academic knowledge on WTE;
- Undertaking efforts so that MEC can create theoretical and practical programs of environmental education for elementary and high school including waste management;
- Development of academic education and training with theoretical and practical content and promotion of partnerships and agreements for the development of Research and Development (R&D) projects.

Support to the Infrastructure Planning Secretariat to assess the economic & financial feasibility of WTE projects

- Assistance s in the planning of MSW management in the economic modeling of WTE projects, which will be integrated into the National Guide for Energy Recovery of Solid Waste 2020. This work also has the participation of the Ministry of Economy, UN/UNDP, FGV, BNDES, MDR, MME, MMA, PPI, among others.

ABREN MAIN GOALS

Represent Associated Companies

- Represent associated companies that are authorized for waste energy recovery, recycling, composting, reverse logistics, waste energy recovery equipment manufacturers, according to their individual or collective demands regarding contact with national and international organizations, agencies and public authorities, municipalities, public companies, mixed capital companies, agencies or similar, federal, state and municipal, directly or indirectly related to the waste energy recovery sector;

Accompany Proposals

- To monitor the processing of proposals, bills and provisional measures of interest to members in the National Congress, state and district legislative assemblies, and municipal legislative chambers;

Promote and Sign Partnerships

- Promote and establish partnerships, consortia, cooperatives, intergovernmental working groups, agreements, contracts and receive donations from various types of companies, organizations and institutions, both public and private, that are in line with the purposes and values of ABREN and its associates;

Propose Legal and Regulatory Solutions

- Propose legal and regulatory solutions to make technically and financially viable projects of interest to the waste energy recovery sector, in line with the association's values;

Properly Certify Companies

- Properly certify companies and enterprises that perform energy recovery of waste, composting, recycling, reverse logistics, concessionaires and authorized companies of electricity distribution that purchase electricity from waste generation, industry, commerce and public agencies that dispose waste for enterprises, energy recovery, recycling and composting, among others;

Promote Training

- Promote training and disseminate knowledge on energy recovery through various media and periodic events, such as workshops, seminars and conferences that bring visibility, as well as partnerships with educational institutions and organizations;

Promote Conduct and Manage Project

- Promote, conduct and manage research and development (R&D) studies and projects on waste energy recovery, recycling, composting, hybrid generation, automation and other disruptive technologies within ANEEL and other research institutions, as well as promoting the dissemination of technical and scientific knowledge in the academic, political and community fields;

ABREN

WtERT – Brasil