



Climate Regulation

in 17 jurisdictions worldwide

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Contributing editor:
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Bech-Bruun

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Kathryn Smuland

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Ariana Frampton
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Editor-in-chief

Callum Campbell

Publisher

Richard Davey

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87 Lancaster Road
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Brazil

Antonio Augusto Rebello Reis

Bichara, Barata, Costa & Rocha Advogados

Main climate regulations, policies and authorities

1 International agreements

Do any international agreements or regulations on climate matters apply in your country?

Brazil approved the United Nations Framework Convention on Climate Change (UNFCCC), being the first country to sign it, and ratified the Kyoto Protocol, directly contracting these regulations. Because Brazil has no mandatory emissions reduction targets under the UNFCCC, the most relevant aspect of the implementation of the convention internally so far has been the development of emissions reduction projects under the clean development mechanism (CDM).

2 International regulations and national regulatory policies

How are the regulatory policies of your country affected by international regulations on climate matters?

In Brazil, after an international agreement (eg, treaty or convention) is signed by the president, it then has to be approved by Congress, by means of a legislative decree. After that, the president needs to ratify and promulgate the agreement through an executive decree, so it can be implemented, combining the wills of the legislative and executive branches. That being done, the international agreement will then be internally treated as federal law, revoking existing contrary regulations.

3 Main national regulatory policies

Outline recent government policy on climate matters.

Brazil has not enacted major federal regulatory policies dealing specifically with climate change. Recently, however, the Brazilian House of Representatives approved a bill establishing the National Policy on Climate Change, which is now with the Senate for final approval. Even though this bill does not present a specific target to reduce greenhouse gases emissions, it outlines general governmental policies toward climate matters. The bill aims to increase the use of renewable sources of energy, implementation of strategies for potential mitigation of climate changes effects, among other important issues.

Additionally, the federal government recently announced its intention to voluntarily reduce Brazilian emissions of greenhouse gases (GHGs) by around 40 per cent. Although according to government officials this would not constitute a mandatory target, it would be presented as a Brazilian voluntary commitment during the next Conference of the Parties of the UNFCCC meeting in Copenhagen in December 2009 (COP-15).

4 Main national legislation

Identify the main national laws and regulations on climate matters.

As mentioned above, to date Brazil has not enacted major federal legislation dealing with climate change. The legislative bill that

creates the National Policy on Climate Change has been approved by the House of Representatives and is now being examined by the Brazilian Senate. Regulations specifically related to the development of carbon emissions reduction projects under the CDM, however, were published by the Inter-Ministerial Committee for Global Climate Change (ICGCC), a technical body composed of representatives from different governmental departments, including the Ministry of the Environment and the Ministry of Mines and Energy, which functions as the national designated authority for the CDM. Additionally, other federal environmental laws indirectly address climate matters, including the National Environment Policy Act (Law No. 6,938 of 1981), etc. Finally, some states and municipalities have taken the lead on this subject and enacted relevant legislation on climate change, such as the state of São Paulo, which recently established a mandatory target of 20 per cent reduction in GHG emissions from the 2005 levels.

5 National regulatory authorities

Identify the national regulatory authorities responsible for climate regulation and its implementation and administration. Outline their areas of competence.

The Ministry of the Environment is the relevant body to establish general principles and strategies for the protection of the environment through elaboration and implementation of public policies, including those related to climate matters, which are the direct responsibility of the Climate Change and Environmental Quality Secretariat of the Ministry of the Environment. The ICGCC (see question 4) is the national designated authority responsible for regulating projects developed under the CDM, deciding, among other issues, whether proposed projects actually contribute to national sustainable development.

General national climate matters

6 National emissions and limits

What are the main sources of emissions of greenhouse gases (or other regulated emissions) in your country and the quantities of emissions from those sources? Describe any limitation or reduction obligations. Do they apply to private parties in your country?

The main sources of emissions of GHGs in Brazil, according to a recently released estimate of the Brazilian Ministry of the Environment, are:

- land use conversion (eg, deforestation in forests and savannahs for cattle raising and agriculture), with 1,139.9 millions of tonnes of CO₂ equivalent per year;
- agribusiness (eg, enteric fermentation, burning of agriculture residues, and soil emissions), with 467.4 millions of tonnes of CO₂ equivalent per year;

- the energy sector (burning of fossil fuels and equivalent secondary emissions), with emissions of 354.3 millions of tonnes of CO₂ equivalent per year;
- general industrial processes (eg, cement production), with 36.9 millions of tonnes of CO₂ equivalent per year; and
- waste management, with 24.4 million tonnes of CO₂ equivalent per year.

At present, there are no specific and mandatory limitations or reduction targets. As mentioned in question 3, the Brazilian government intends to announce, at the COP-15, a voluntary commitment to reduce the country's GHG emissions by around 40 per cent. In addition, some states and municipalities (eg, São Paulo) have enacted legislation establishing mandatory reduction targets.

7 National emission projects

Describe any major emission reduction projects implemented or to be implemented in your country. Describe any similar projects in other countries involving the participation of government authorities or private parties from your country.

Several emissions reduction projects have been developed or are still under implementation in Brazil. Such projects generate credits both in the regulated (CERs) and voluntary (VERs) markets. In the regulated market, credits are generated within the CDM. In Brazil, 339 CDM projects have been proposed to date, with 48 per cent related to renewable energy; 17 per cent to pig farming; 12 per cent to substitution of fossil fuels; 9 per cent to recovery of landfill gases; 6 per cent to energy efficiency; 4 per cent to waste management; 2 per cent to industrial processes; and 1 per cent to N₂O reduction.

In the voluntary market there are initiatives related to Reduced Emissions from Deforestation Degradation (REDD). A successful example of a REDD project in Brazil is the Juma Project, which was developed jointly by the government of the state of Amazonas and the Sustainable Amazon Foundation, being the first Brazilian project to have its methodology validated independently, considering the requirements of the Climate, Community and Biodiversity Alliance. Juma's goals are to avoid the deforestation of tropical forest, and its consequent greenhouse gas emissions, and to increase the wellbeing and the quality of life of the local people living at the Juma Sustainable Development Reserve (a legally protected area). Credits in this project were purchased by hotel group Marriot International.

Domestic climate sector

8 Domestic climate sector

Describe the main commercial aspects of the climate sector in your country, including any related government policies.

Because there is still no comprehensive specific federal regulation on climate change in Brazil, the main commercial aspects of the climate sector in the country are still generally restricted to the carbon credits market (regulated and voluntary). There are, however, public programmes with commercial impact on the sector. For example, in 2008 the Brazilian government launched the Amazon Fund as a way to obtain resources to stimulate forest preservation. The Fund's goal is to promote projects aiming at prevention of deforestation and for the conservation and the sustainable use of the Amazon forest. Resources for this fund come mostly from donations of developed countries. In 2008, for instance, Norway agreed to donate US\$100 million to the fund. With the expected enactment of the National Policy on Climate Change and also related state and municipal legislation (São Paulo being the first, as mentioned above) several financial mechanisms are likely to be created and will impact the commercial aspects of the climate sector in Brazil in the near future.

General emissions regulation

9 Regulation of emissions

Do any obligations for emission limitation, reduction or removal apply to your country and private parties in your country? If so, describe the main obligations.

Until now, Brazil has not agreed to specific GHG emission limitations, reductions or removal obligations internationally (under the UNFCCC Brazil has no emissions reduction target). The Brazilian government, however, intends to announce at the COP-15 a voluntary commitment to reduce the country's GHG emissions by around 40 per cent. Also, the federal government has not enacted mandatory internal GHG emissions limitations, reductions or removal rules. States and municipalities, however, have approved specific GHG emissions reduction targets (eg, the state of São Paulo established a 20 per cent emissions reduction goal compared to the 2005 levels).

Additionally, all potentially polluting activities developed in Brazil are subject to an environmental permit proceeding, in which, among other aspects, general air emissions are analysed and regulated. Environmental permits impose compliance with nationally applicable air emissions standards, which are set by the National Environmental Council (CONAMA).

10 Emission permits or approvals

Are there any requirements for obtaining emission permits or approvals? If so, describe the main requirements.

To date there are no permitting or approval procedures related specifically to GHG emissions in Brazil. Regular environmental permits proceedings – mandatory for any potentially polluting activities – restrict air emissions in general, but is not directly focused on climate change issues.

11 Oversight of emissions

How are emissions monitored, reported and verified?

As mentioned above, there is no mandatory permits system specifically associated with GHG emissions. General emissions are controlled under environmental permits and are monitored by the entrepreneur, and shall be reported to the environmental agency periodically.

Emission allowances (or similar emission instruments)

12 Regime

Is there an emission allowance regime (or similar regime) in your country? How does it operate?

Not applicable; see question 11.

13 Obtaining, possessing and using emission allowances

What are the requirements for obtaining emission allowances? How are allowances held, cancelled, surrendered and transferred?

Not applicable; see question 11.

14 Registration

Are there any emission allowance registries in your country? How are they administered?

Not applicable; see question 11.

 Trading of emission allowances (or similar emission instruments)

15 Emission allowances trading

What emission trading systems or schemes are applied in your country?

There is no emission trading system in Brazil.

16 Trading agreements

Are any standard agreements on emissions trading used in your country? If so, describe their main features and provisions.

There is no emission trading system in Brazil.

 Sectoral regulation

17 Energy

Give details of (non-renewable) energy production and consumption in your country, including types and quantities of energy, and related emissions. Describe any regulations on emissions in this regard.

In 2008, the production of non-renewable energy in Brazil was:

- 36.7 per cent from oil and derivatives (92.5 million toe – tonnes of oil equivalent);
- 10.3 per cent from natural gas (25.9 million toe);
- 6.2 per cent from mineral coal and derivatives (15.7 million toe); and
- 1.5 per cent from uranium and derivatives (3.7 million toe).

The non-renewable energy consumption in Brazil was:

- 28.2 per cent from petroleum derivatives (59.704 million toe);
- 7.2 per cent from natural gas (15.345 million toe); and
- 21 per cent from other sources – leaches, refinery gas, coke, among others (44.449 million toe).

Statistics are from the Ministry of Mines and Energy (National Energy Balance 2009). To date there is no regulation specifically focused on emissions of GHGs from non-renewable sources of energy. Compliance with general air emissions standards, however, is mandatory and set forth as a restriction in the applicable environmental permit. Such standards in Brazil are set by the CONAMA. The latest regulation on emissions standards from point sources, including non-renewable energy generation, is Resolution No. 382 of 2006.

18 Other sectors

Describe, in general terms, any regulation on emissions in connection with other sectors.

There is no specific federal regulation on GHG emissions in Brazil. General emissions are restricted under the relevant environmental permits proceedings. Emission standards in Brazil are set by the CONAMA. The latest regulation on emissions standards from point sources, including steel, aluminium, cement, cellulose, oil, fertilisers and other highly polluting industries, is Resolution No. 382 of 2006. Specifically with respect to the transportation sector, Resolution CONAMA No. 18 of 1986 created the Programme for Control of Air Pollution from Automobiles (PROCONVE), which sets forth emissions standards applicable to light and heavy vehicles.

 Renewable energy and carbon capture

19 Renewable energy consumption and policy

Give details of the production and consumption of renewable energy in your country. What is the policy on renewable energy and carbon capture?

In 2008, production of renewable energy in Brazil was:

- 13.8 per cent from hydroelectric energy and electricity (34.9 million toe);
- 11.6 per cent from wood and vegetal coal (29.2 million toe);

- 16.4 per cent from sugar cane products (41.3 million toe); and
- 3.5 per cent from other renewable sources (8.8 million toe).

Renewable energy consumption in Brazil was:

- 17.4 per cent from electricity (36,868 million toe);
- 13.5 per cent from sugar cane bagasse (28,494 million toe);
- 8.0 per cent from wood (16,852 million toe); and
- 4.8 per cent from ethanol (10,139 million toe),

Statistics are from the Ministry of Mines and Energy (National Energy Balance 2009). Also, Brazil has developed an Incentive Programme for Alternative Electric Energy Sources (PROINFA), created to increase the production of electric energy derived from wind, biomass and small hydro sources.

20 Wind energy

Describe, in general terms, any regulation of wind energy.

Studies include Brazil among the countries with greater potential for wind power generation. Research from 2001 (ATLAS CEPTEL) indicates potential generation of 143,000GW (based on old technology). The establishment of the PROINFA, which, as mentioned in question 19, created an incentive for wind, small hydro and biomass energy generation, was a relevant initial step towards increasing wind energy generation in Brazil. In December 2009, the Ministry of Mines and Energy will hold an auction exclusively for contracts to produce energy from wind projects. So far, 441 projects have been presented amounting 13,342MW. Despite the great potential for wind energy generation, however, to date there is still no general legal framework regulating the development of wind power projects in Brazil. Such projects are subject to regular environmental permits proceedings and authorisation by the national electric energy agency (ANEEL). Simplified environmental permits proceedings usually applies to wind energy projects (as regulated by Resolution CONAMA No. 279 of 2001).

21 Solar energy

Describe, in general terms, any regulation of solar energy.

Brazil has good potential for solar energy generation. The country already has a well developed market for solar water heating systems, which tend to grow fast with recent support by public policies (mainly related to lower income population housing projects). Projects for direct electricity generation are fewer in number, but also present and relevant, especially in isolated regions of the country. To date, however, Brazil has not enacted general framework legislation on renewable energy generation, including solar projects. Several new legislative bills aiming at the promotion of the use of renewable energy sources, including solar energy, are under discussion. Solar energy projects are subject to regular environmental permits proceedings and authorisation by the national electric energy agency (ANEEL). Simplified environmental permitting usually applies to solar projects (as regulated by Resolution CONAMA No. 279 of 2001).

22 Hydropower, geothermal, wave and tidal energy

Describe, in general terms, any regulation of hydropower, geothermal, wave or tidal energy.

According to 2008 data released by the Ministry of Mines and Energy, 80 per cent of all electricity produced in Brazil comes from hydroelectric power plants. Regular environmental permits proceedings apply to hydroelectric projects (specific requirements are also set by the CONAMA in Resolution No. 6 of 1987). Simplified permits proceedings are possible for small hydro projects. ANEEL authorisation is mandatory in both cases. There is no specific regulation related to

Update and trends

Although Brazil has not yet enacted mandatory emissions reduction targets at the federal level, government officials have already publicly announced that Brazil is willing to present a voluntary commitment to reduce its GHG emissions by around 40 per cent as part of a broader international negotiation. Also, the federal legislative bill dealing with climate regulation is in the final approval phase, and some states and municipalities have already enacted related legislation (the state of São Paulo officially established a 20 per cent reduction in GHG emissions). It is therefore foreseeable that climate-related legal requirements will be enacted and, thus, such matters will officially become part of the industry agenda in Brazil. Regulation related to deforestation prevention projects is also expected, especially with recent government support for REDD projects.

geothermal, wave or tidal energy in Brazil, and such projects would, in any case, be subject to regular environmental permits proceedings and ANEEL authorisation.

23 Waste to energy

Describe, in general terms, any regulation of production of energy based on waste.

Although Brazil generates a considerable volume of energy from waste (including ethanol bagasse, landfill biogas, wood residues and animal and vegetal waste, etc), there is no comprehensive legislation specifically related to this subject in Brazil. States with larger waste energy production (eg, São Paulo) have developed specific requirements applicable to the construction and operation of such facilities. Also, although not many urban solid waste generation projects are in place in Brazil, the government's 10-Year Energy Programme expressly lists this source of energy as relevant to increasing alternative energy production in the country. Regular environmental permits proceedings and ANEEL approval will apply to all waste energy generation projects.

24 Biofuels

Describe, in general terms, any regulation of biofuels.

Brazil is one of the largest producers, and probably the most efficient producer, of biofuels in the world. Brazil's leadership derives mostly

from the development, in 1975, of the National Alcohol Programme, a large-scale governmental programme aiming at the substitution with ethanol of gasoline fuelled vehicles in response to the international oil crisis of 1973 (aggravated in 1979). 2008/09 ethanol production in Brazil already totals over 27 billion litres, and as a result of the incentive programme, in 2008 over 90 per cent of all vehicles sold in Brazil are flex-fuel (running on any combination of ethanol and gasoline). Brazil is also developing important biodiesel projects. The National Biodiesel Programme established a mandatory addition of 2 per cent of biodiesel to the diesel sold in the country as of 2008 and such percentage will increase to 5 per cent as of 2010. The Brazilian programme is based on the use of different oleaginous cultures, and aims to provide greater social benefits, especially to small farmers. Environmental permits proceedings and approval of the National Petroleum Agency (ANP) will apply to biofuels production projects.

25 Carbon capture and storage

Describe, in general terms, any regulation of carbon capture and storage.

To date, there is no specific regulation on carbon capture and storage in Brazil. Experimental projects are under development, mostly by the Brazilian National Oil Company (Petrobras) in partnership with national and international research institutions.

Climate matters in transactions

26 Climate matters in M&A transactions

What are the main climate matters and regulations to consider in M&A transactions and other transactions?

Although Brazil has not enacted mandatory reduction targets at the federal level to date, because the government has indicated that it will present a voluntary commitment at the COP-15 to reduce its GHG emissions by around 40 per cent, companies analysing potential acquisitions in the country should evaluate the potential impact of future legislation on climate matters upon target activities. Obligations related to carbon emissions inventory and disclosure should also be considered, especially in light of imminent federal and state legislation mentioned above.

Bichara, Barata, Costa & Rocha Advogados

Antonio Reis

antonio.reis@bbcr.com.br

Rua Do Ouvidor, 121, 27-29º Andares
Centro, Rio de Janeiro, RJ
20040-030
Brazil

Tel: +55 21 3231 8011
Fax: +55 21 2224 5295
www.bbcr.com.br

