

NEW REGULATION ON ATMOSPHERIC POLLUTION

One of the most groundbreaking legal innovations that have occurred during 2011 is the enactment of the regulation that contains the Primary Standard on Fine Inhalable Particulate Matter PM 2.5 and the Emission

Standard for Thermoelectric Power Plants. Both regulations will enter into force on January the 1st of 2012.

The promulgation of both regulations represents an important improvement in matter of air pollution, and it is expected that these norms will bring benefits to the environment and people's health as well as new challenges for the energy sector.

• **Supreme Decree N° 12/11 of the Ministry of the Environment: Primary**

Standard on fine inhalable particulate matter PM 2.5

As every Primary Standard, Supreme Decree N° 12/11 of the Ministry of the Environment (hereinafter the "SD 12/11") establishes maximum values of a determined pollutant in the environment, with the objective of protecting people's life and health. In this case, the regulated pollutant is the breathable particulate matter, this is, particulate material whose diameter is smaller than 2.5 μ (hereinafter "PM 2.5").

PM 2.5 is a qualification of particulate matter, which is tiny enough to penetrate the respiratory track deep into the pulmonary alveolus. Main sources of this pollutant are cars, buses and trucks, thermoelectric power plants, boilers, industrial processes, foundries, metallurgic processes, biomass combustion, firewood heating, agricultural burning and ammonium emissions from agricultural processes.

The Primary Standard on breathable particulate matter PM 2.5 establishes in the SD 12/11 is the following: twenty microgram per cubic meter (20 $\mu\text{g}/\text{m}^3$) as the maximum annual concentration and fifty microgram Carey y Cía. Ltda. per cubic meter (50 $\mu\text{g}/\text{m}^3$) as the

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maximum 24 hour concentration.

The aforementioned regulation also provides that the norm will be considered as exceeded when 98% of the daily average concentration registered during a year is over 50 µg/m³, as well as the tri-annual average of annual concentration is over 20 µg/m³, measured in any of the survey meter station characterized as a population representative survey meter station (estaciones de monitoreo con representatividad poblacional).

If an increase in PM 2.5 concentrations occurs within a determined zone (a whole region, a borough or a zone specified in the corresponding declaration), reaching 80% to 100% of the values fixed in the Primary Standard, the zone will be declared as a "Latent Zone". On the other hand, if 100% of the maximum values fixed in the Primary Standard were exceeded, the authority may declare the zone as "Saturated Zone". Such declarations are the

prelude for the formulation of a Prevention and Decontamination Plans, respectively.

Article 5 of the SD 12/11 also defines the levels that will trigger a declaration of an environmental emergency situation that contains specific actions in order to restore the levels of concentration allowed by law, such as suspension of some industrial activity, restrictions on the use of automobiles among others. These levels are those in which the 24-hour- concentration is within the ranges established in the following table, contained in the aforementioned article:

Nivel	Concentración 24 horas
1 Alerta	80-109 MP2,5 (µg/...
2 Preemergencia	110-169
3 Emergencia	170 o superior

SD 12/11 will be enforceable as from 1st of January of 2012. Nevertheless, its interim article establishes that, for the declaration of Latent or Saturated Zone, the data that might be used is the one obtained from measurements performed previous their enactment. Also, it establishes that the auditing entity will be the relevant Health Ministerial Regional Secretary, until the full enactment of the Environmental Superintendence.

• **Supreme Decree No. 13/11 of the Ministry of the Environment:
Emission Standard for Thermoelectric Power Plants.**

The objective of Supreme Decree N° 13/11 of the Ministry of Environment, Emission Standard for Thermoelectric Power Plants (hereinafter the “SD 13/11”, or the “Emission Standard”), is to prevent and control in the whole territory of the Republic the emissions of particulate matter, sulfur dioxide, nitrogen oxides and mercury released by thermoelectric power plants consisting in turbines or boilers with thermal capacity equal or over 50 Megawatt Thermal (MW(Th)) considering the upper limit on the energetic value of the utilized combustible. Boilers and turbines which are part of co-generation processes are exempt of the compliance of the Emission

Standard.

SD 13/11 makes a distinction between existing and new emitting sources. **“Existing sources”** are those which are operating or declared under construction pursuant article 272 of the General Electric Services Bylaws, up to one year after the date established in the corresponding Technical

Reports of Fixation of Node Price of October 2010 for both interconnected systems (Sistema Interconectado Central and Sistema Interconectado del Norte Grande). Those dates can be extended once, for each emitting source, for one year maximum, by a justified report made by the Ministry of Energy and a Supreme Decree dictated by the President, issued by the Ministry of Environment. On the other hand, **“New sources”** are those that do not fit in the described concept of existing emitting sources.

The distinction is important to determine the maximum parameters to be fulfilled, and to determine the moment from when they will become required. The parameters, established in article 4°, are the following:

Table 1. Emission limits for existing emitting sources (mg/Nm3):

Combustible	Material Particu...	Dióxido de Azufr...	Óxidos de Nitró...
Sólido	50	400	500
Líquido	30	30	200

Gas	No aplica	No aplica	50
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Table 2. Emission limits for new emitting sources (mg/Nm3):

Combustible	Material	Dióxido de Azufr...	Óxidos de Nitró...
Sólido	30 Particu...	200	200
Líquido	30	10	120
Gas	No aplica	No aplica	50

Table 3. Emission limit for Mercury, for new and existing emitting sources that use coal and / or petcoke (mg/Nm3):

Article 5 of the SD 13/11 establishes that existing emitting sources must fulfill the limit values for particulate matter within 2 years and 6 months from its publication in the Official Gazette.

Related to other parameters (sulfur dioxide, nitrogen oxides and mercury), the standard will be enforceable in 4 years within zones declared as Latent or Saturated Zones, and in 5 years within other areas. Both periods are counted from the publication of the SD 13/11 in the Official Gazette. For new emitting sources, all parameters in tables 2 and 3 will be enforceable from the moment of the publication of the SD 13/11 in the Official Gazette.

The feasibility of establishing a deadline for the compliance of standards established for the new emitting sources by the existing emitting sources will be assessed in the first revision process of the SD 13/11 that must be performed within 5 years from its publication.

Related to emissions offsetting, the SD 13/11 establishes that existing emitting sources will only be allowed to offset or transfer emissions reductions if they are able to prove reductions that are additional to the fulfillment of the standard established in the SD 13/11.

Finally, existing sources corresponding to turbines, with capacity of 50 MW(Th) to 250 MW(Th) using diesel or gas, and with an operational performance of less than 876 hours per year (this is, less than 10% on an annual base-time) are exempt of the compliance of the standard for nitrogen oxides.

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