



CORPORATE SOCIAL RESPONSIBILITY SECTOR POLICY – COAL-FIRED POWER GENERATION

Contents

Preamble.....	2
1. Sector Policy.....	3
1.1 <u>Objective</u>	3
1.2 <u>Scope</u>	3
1.3 <u>Rules and Standards of the Policy</u>	3
2. Group-Level Implementation Mechanisms.....	8
3. Disclosure and Follow-up.....	8
4. Disclaimer.....	8
5. Sector glossary.....	9



PREAMBLE

As part of its commitment to corporate social responsibility, BNP Paribas has developed a consistent policy regarding its financial products and services for the coal-fired power generation industry.

According to the International Energy Agency (IEA), coal accounts for 41% of global electricity supply and is the main source of electricity in the world today. Coal therefore plays a significant role in the global energy mix. Coal can contribute to the economic development of some countries by enabling low cost and reliable electricity access and by supporting their energy independency.

BNP Paribas also acknowledges that coal-fired power generation is a large emitter of carbon dioxide (CO₂) and a key contributor to climate change. According to the IEA, coal-fired power plants account for respectively 73% of CO₂ emissions from power generation and 29% of the total energy-related CO₂ emissions¹.

Therefore, a balance must be found between the needs for enhanced electricity access and economic development and the needs for reducing CO₂ emissions from human activities which is critical to limit climate change. The best technologies available should be promoted to enhance coal-fired power plants efficiency and to reduce their environmental footprint.

BNP Paribas, as a provider of financial services, may support companies / countries that wish to develop their coal-fired power capacities. BNP Paribas considers, as part of its CSR policy, that it is essential - both for the countries under consideration and for the international community as a whole - that any company / country developing its coal-fired power generation capacity meets essential requirements regarding safety, security and protection of the environment for future generations.

BNP Paribas has defined the present sector policy to identify specific requirements to select projects that take into account the above-mentioned considerations. This sector policy also establishes consistent rules for the bank worldwide activities.

¹ The power sector accounts for 40% of the world's total energy-related CO₂emissions (World Energy Outlook 2010).



1. SECTOR POLICY

1.1 Objective

This policy defines a set of rules and procedures regarding financial products and services provided by BNP Paribas entities. They aim at addressing social and environmental issues of the coal-fired power generation sector and at establishing guidelines for conducting business in a responsible manner.

1.2. Scope

Geographical limits: worldwide.

Geography: all BNP Paribas Group entities.

BNP Paribas Group entities: this policy applies to all business lines, branches, subsidiaries and joint ventures of which BNP Paribas has the operational control. When BNP Paribas establishes new joint ventures in which it has a minority stake, it strives to include its standards as part of the joint venture agreement.

Coal-Fired Power Plant projects: construction, including expansion and upgrading of a Coal-Fired Power Plant (CFPP). Other projects linked to the coal-fired power industry are not included in this scope.

Coal-Fired Power Plant companies: utility companies involved in the power generation sector that own or operate CFPPs and for which coal-fired power accounts for at least 30% of their total installed power generation capacity.

Financial products & services: this policy applies to all financing activities provided by BNP Paribas (lending, debt and equity capital markets, guarantees and advisory work, etc.). It covers all new CFPP projects and CFPP companies. For financing agreements with CFPP companies that predate this policy, the rules and standards set out below will be applied as such agreements are due for review.

Asset management: this policy applies to all BNP Paribas entities managing proprietary assets and third-party assets, with the exception of index-linked products. External asset managers are actively monitored and encouraged to implement similar standards.

1.3 Rules and Standards of the Policy

The coal-fired power generation sector is highly regulated at both national and international levels, particularly on air emissions. BNP Paribas expects CFPP projects and companies to comply with existing local laws and regulations as well as with international conventions ratified by their operating countries. This policy sets additional criteria to be respected by CFPP projects or companies.

These criteria were identified to address the main issues highlighted in the preamble. They are split in two categories: mandatory requirements and evaluation criteria. Mandatory requirements are to be understood as sine qua non: they have to be met without exception before BNP Paribas considers funding a CFPP project or a CFPP company. In addition to these mandatory requirements, evaluation criteria have been identified to develop the analysis performed by BNP



Paribas. Based on the results of such complementary due diligence, BNP Paribas reserves its right to request additional requirements or decline its involvement even if the mandatory requirements are met.

1.3.1 Financial services for Coal-Fired Power Plant projects

The Equator Principles, the financial sector's leading voluntary standards for identifying, assessing, and managing environmental and social risks related to Project Finance (PF) transactions, to which BNP Paribas is signatory, will be applied to all new PF lending and advisory mandates for projects with capital costs of US\$10 million or above.

1.3.1.1 Host country

Mandatory requirements: BNP Paribas will ensure that it provides financial products and services to CFPP projects in countries having "sufficient governance" regarding environmental and social issues.

BNP Paribas considers that a country has "sufficient governance" on environmental and social issues if it complies with the following requirements:

- Existence of legal framework regarding occupational Health and Safety provisions including workers, and subcontractors
- Existence of legal framework regarding environmental provisions on air emissions² and water discharges³.

Evaluation criteria: At the early stage of the decision-making process, BNP Paribas will carry out a preliminary analysis to understand the framework in which the CFPP is planned. This analysis will be based on the following criteria:

- Energy independency aspects:
 - Availability and origin of coal reserves for the host country
 - Energy independency and/or overall energy security of the host country
- Economic and social aspects: low energy cost and improvement of electricity access for the local population
- Existence of a national commitment to limit greenhouse gas (GHG) emissions

² "The primary emissions to air from the combustion of coal are sulphur dioxide (SO₂), nitrogen oxides (NO_x), particulate matter (PM), carbon monoxide (CO), and greenhouse gases, such as carbon dioxide (CO₂). Depending on the fuel type and quality, mainly waste fuels or solid fuels, other substances such as heavy metals (i.e., mercury, arsenic, cadmium, vanadium, nickel, etc), halide compounds (including hydrogen fluoride), unburned hydrocarbons and other volatile organic compounds (VOCs) may be emitted in smaller quantities, but may have a significant influence on the environment due to their toxicity and/or persistence. Sulphur dioxide and nitrogen oxide are also implicated in long-range and trans-boundary acid deposition". Source: World Bank / IFC EHS Guidelines for Thermal Power Plants (December 2008)

³ Water discharges include thermal discharges, wastewater effluents, and sanitary wastewater. Source: World Bank / IFC EHS Guidelines for Thermal Power Plants (December 2008)



- Status of the host country's plan regarding carbon capture and storage projects.

1.3.1.2 Coal-fired power plant project

Mandatory Requirements: BNP Paribas will ensure that it provides financial products and services to current or planned CFPP projects that meet sufficient technical, safety and environmental standards.

BNP Paribas considers that a CFPP project meets sufficient technical standards if it complies with the following requirements:

Technical requirements

- *For generic greenfield CFPP projects⁴:* BNP Paribas will only provide financing to new CFPP projects using super-critical technology with a net energy efficiency⁵ of at least 43% for projects located in High Income⁶ countries and of at least 38% in other countries.
- *For other greenfield CFPP projects:* BNP Paribas is aware that lower CO₂ emissions can be achieved by using alternative solutions, such as biomass co-firing or combined heat and power production. BNP Paribas will only finance such CFPP projects if their CO₂ intensity is below 550 gCO₂/kWh for High Income countries, and below 660 gCO₂/kWh for other countries. When commercially available, carbon capture & storage (CCS) solutions have the potential to reduce residual CO₂ emissions to significantly lower levels.
- *For brownfield CFPP projects:* BNP Paribas will only provide financing to CFPP retrofitting projects if the CFPP is brought into compliance with the applicable IFC Environmental, Health, and Safety Guidelines for Thermal Power Plants and if the resulting net energy efficiency is either (i) brought to a level at least equal to the level required for a greenfield CFPP project or (ii) is increased by at least 10% from the initial level.

Environmental & Social requirements

- The CFPP project has to comply with existing social and environmental laws, at a local or state/provincial level, as well as with international regulations ratified by their operating countries.
- The CFPP project has to comply with the then applicable IFC Environmental, Health, and Safety Guidelines for Thermal Power Plants (which includes : emissions to air of sulphur dioxide (SO₂), nitrogen oxides (NO_x), particulate matter (PM), carbon monoxide (CO), and greenhouse gases, water consumption and discharge).
- The CFPP project has been subject to a social and environmental impact assessment, addressing at least the project impacts on surrounding communities and environment.
- The CFPP project has obtained or will apply at the appropriate time for its operating license.

⁴ A generic CFPP refers to a power plant solely dedicated to electricity generation and using coal as the only fuel.

⁵ "Net energy efficiency" is to be understood as the higher heating value (HHV) energy efficiency of the CFPP, net of the plant's own energy consumption.

⁶ As defined in the World Bank Country and Lending Groups database.



Evaluation criteria: BNP Paribas will also carry out an analysis of the proposed project, based on the following evaluation criteria:

- ➔ The CFPP project has set up plans to comply with the relevant requirements of the main ILO Conventions (as defined in the glossary), regardless of the host country ratification status.
- ➔ The CFPP project's CO₂ intensity (measured in g CO₂ emitted per kWh of energy output) is lower than the average CO₂ intensity of the host country's fossil fuel fired power plants (gas, oil, coal)⁷.
- ➔ The eligibility of the CFPP project for carbon credits in the Credit Development Mechanism and Joint Implementation framework will be considered.
- ➔ An evaluation of the CFPP project and host country will be carried out to determine whether the criteria defining a "CCS⁸ Ready"⁹ coal-fired power plant are met as follows:
 - A specific study has been carried out to ensure that the facility is technically capable of being fully retrofitted for CO₂ capture;
 - It is technically and physically possible to connect retrofitted capture equipment to the existing facility;
 - There are realistic pipeline or other routes to storage of CO₂;
 - One or more potential storage areas have been appropriately assessed (safe geological storage of full lifetime volumes and rates of captured CO₂) or potential industrial use for CO₂ captured;
 - Other known factors (including any additional water requirements) that could prevent installation and operation of CO₂ capture, transport and storage have to be identified and credible ways in which they could be overcome have to be assessed;
 - Costs of retrofitting capture, transport and storage have been estimated;
 - There has been public engagement and consideration of health, safety and environmental issues;
 - "CSS Ready" status is reviewed and reported on periodically.

⁷ As determined using the latest available data from the International Energy Agency (IEA).

⁸ Carbon Capture and Storage (CCS) is a process consisting of the separation of CO₂, transport to a storage location, and long-term isolation from the atmosphere. A CO₂ capture ready power plant is a plant which can include CO₂ capture when the necessary regulatory or economic drivers are in place.

⁹ Based on the set of criteria published by The Global CCS Institute in their CCS Ready – Issues Brief 2010 n°1.



1.3.2 Financial services for Coal-Fired Power Plant companies

The section does not apply to the parties involved in a CFPP project (such as the sponsors of a special purpose vehicle). Requirements concerning these parties are detailed in the CFPP project section.

1.3.2.1 The CFPP company

Mandatory requirements: BNP Paribas will ensure that it provides financial products and services to or invest in CFPP companies that meet sufficient technical, social and environmental standards.

BNP Paribas considers that a CFPP company meets sufficient standards if it complies with the following requirements:

- The CFPP company discloses its safety track records (work accidents, fatalities...)
- The CFPP company discloses or can provide on demand any relevant disclosure regarding environmental data (air emissions of sulphur dioxide (SO₂), nitrogen oxides (NO_x), particulate matter (PM), carbon monoxide (CO), and greenhouse gases, such as carbon dioxide (CO₂), water consumption and discharges).

Evaluation criteria: BNP Paribas will also carry out an analysis of the CFPP company, based on the following evaluation criteria:

- The CFPP company is not involved in severe controversies and incidents related to violations of any UN Global Compact Principles¹⁰.
- The CFPP company has a convincing track record on safety, environmental and social issues evaluated through sector and geographical benchmark.
- The operating company is carrying out a CO₂ emission reduction plan for electricity production, evidencing a decreasing trend in CO₂ emission per kWh over the 5 previous years.

BNP Paribas' regular client acceptance policies constitute the basis of any engagement. For any transaction, BNP Paribas requires CFPP companies to have a transparency attitude regarding its activities, group structure and shareholding up to the ultimate level of control.

¹⁰ <http://www.unglobalcompact.org/AboutTheGC/TheTenPrinciples/index.html>



2. GROUP-LEVEL IMPLEMENTATION MECHANISMS

Results of the evaluation according to the present policy will provide elements for decision making by BNP Paribas. As and when necessary, an ad hoc senior management committee shall examine these results. If required, BNP Paribas may request complementary due diligence before concluding on the acceptability of the transaction.

Operational tools and awareness workshops are rolled out to ensure that the Group's staff is able to implement this CSR sector policy.

2.1 Asset Management and services

BNP Paribas entities managing third-party assets will progressively implement all the relevant requirements of this policy. A transition is indeed necessary due to the fact that existing and potential investors have to be informed of the existence and implications of this policy.

3. DISCLOSURE AND FOLLOW-UP

BNP Paribas' stakeholders will be informed of the existence and the content of this policy. The policy will be posted on BNP Paribas' website. Furthermore a copy will be systematically provided to our clients and potential clients as part of the due diligence process or upon discussion of any financial services to be provided subsequent to the official release date of this policy.

BNP Paribas will review this policy regularly and in the light of the prevailing circumstances it may update it to make sure it is in continued alliance with national and international regulations and best practices.

BNP Paribas welcomes any constructive feedback and comments on this policy.

4. DISCLAIMER

In order to comply with regulations and to implement the principles defined in its internal procedures and sector policies, BNP Paribas does its best to get information, particularly from coal-fired power companies, on their sustainability policies and practices. BNP Paribas bases its policy on the information gathered from coal-fired power companies and from its partners. However, it is dependent on the quality, accuracy and up-to-datedness of information.



5. SECTOR GLOSSARY

The following definitions apply in this policy.

Main ILO Conventions:

ILO Convention 87 on Freedom of Association and Protection of the Right to Organize

ILO Convention 98 on the Right to Organize and Collective Bargaining

ILO Convention 29 on Forced Labor

ILO Convention 105 on the Abolition of Forced Labor

ILO Convention 138 on Minimum Age (of Employment)

ILO Convention 182 on the Worst Forms of Child Labor

ILO Convention 100 on Equal Remuneration

ILO Convention 111 on Discrimination (Employment and Occupation)

CCS: Carbon Capture and Storage is a process consisting of the separation of CO₂, transport to a storage location and long-term isolation from the atmosphere. While CCS is a promising technology and a key climate change mitigation option for the future, it is unlikely to be available on commercial basis before 2015-2020, although opinions differ among various stakeholders. At the time of publication of this policy, there are three main technologies currently available:

- Pre-combustion CO₂ capture involves removing all or part of the carbon content of a fuel before burning it. The fuel is processed to produce a gas stream that primarily consists of CO₂ and hydrogen.
- In Post-combustion capture CO₂ is captured from the flue gas by using a chemical solvent that reacts with CO₂. The cleaned flue gas is released into the atmosphere, while the captured CO₂ is transported to a storage site.
- Oxy-fuel combustion involves burning fossil fuel in nearly pure oxygen rather than in air. This produces a nitrogen free flue gas with water vapour and a high concentration of carbon dioxide as its main components. This makes it easy to further concentrate the flue gas to an almost pure stream of CO₂.

CCS Ready: According to the International Energy Agency (IEA), "a CO₂ capture ready power plant is a plant which can include CO₂ capture when the necessary regulatory or economic drivers are in place. The aim of building plants that are capture ready is to reduce the risk of stranded assets and 'carbon lock-in'. Developers of capture ready plants should take responsibility for ensuring that all known factors in their control that would prevent installation and operation of CO₂ capture have been identified and eliminated. This might include:

- A study of options for CO₂ capture retrofit and potential pre-investments
- Inclusion of sufficient space and access for the additional facilities that would be required
- Identification of reasonable routes to storage of CO₂

Competent authorities involved in permitting power plants should be provided with sufficient information to be able to judge whether the developer has met these criteria".



Source: IEA Greenhouse Gas R&D Programme, CO₂ Capture Ready Plants, Technical Study (in support of the G8 Plan of Action), 2007.

Supercritical technology: Plants operating with a steam cycle at higher temperatures and pressures and therefore achieving higher efficiency than conventional pulverised coal combustion (PCC) units and significant CO₂ reductions.

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