SECTOR POLICY

THERMAL POWER

1. INTRODUCTION

Within the framework of its Corporate Social Responsibility policy, Societe Generale (the "Bank") intends to take into account within its group the environmental and social (E&S) issues associated to all its activities, to better control their impact and promote good practices, with an objective of continuous improvement. The Bank thus defined E&S General Guidelines which set key standards and parameters for a responsible engagement in all its banking and financial activities. In addition to this general framework, Cross-sectorial Policies dealing with E&S issues common to all sectors are developed, as well as Sector Policies where the Bank looks more specifically into certain sectors identified as sensitive and in which it plays an active role. The Thermal Power sector has been identified as one such sector.

Societe Generale provides a range of banking and financial services to the Thermal Power industry sector. Societe Generale recognises it has a role to play in the transition to a low-carbon economy and supports governments and private-sector efforts towards diversification of the energy sources and wider use of renewable energy in many of the markets in which it operates. However, Societe Generale believes that in the foreseeable future fossil-fuel power generation will still be part of the energy mix of many countries. The Bank is willing to remain a value-adding partner to its clients in this sector, while ensuring that such support is provided in a responsible and considered manner. Societe Generale recognises the importance of the E&S risks and impacts associated with these activities. This is why the Bank aims for the highest E&S standards when considering the provision of banking and financial services to the Thermal Power industry.

ENERGY E&S SECTOR POLICIES

Societe Generale's Energy Sector E&S Sector Policies seek to identify E&S issues throughout the whole value chain in which the Bank is active, from retrieval of the energy source; to power and heat production; to transportation, distribution and storage; and end user energy consumption. The Bank will identify and develop additional Policies as necessary in the future to assist it in better addressing E&S issues within this value chain. The Energy E&S Sector Policies of Societe Generale and their current status include:

	Energy E&S Sector Policies	**Status**
Liquid and Gaseous Fuels Production	1. Oil and Gas Sector Policy	Published
	2. Alternative Liquid and Gaseous Fuels Sector Policy	In development
Thermal Power	3. Coal-Fired Power Sector Policy	Published
	4. Civil Nuclear Power Sector Policy	Published
	5. Thermal Power Sector Policy	This document
Renewable Energy	6. Dams and Hydropower Sector Policy	Published
	7. Renewable Energy Sector Policy	In development
Electricity Transmission & Distribution	*integrated to* 8. Infrastructure Policy	To be developed

2. COMMITMENT

Societe Generale is committed to incorporating in its decision-making processes the review of the E&S impacts potentially associated with the activities of its clients. The Bank will work with clients who meet or aim at meeting its sustainability standards. Societe Generale will take appropriate measures if these standards are not met, or if the client no longer aims at meeting them.

This Sector Policy may evolve in time, according to legislative or regulatory evolutions and as a result of the discussions between the Bank and its various stakeholders.

3. RISK ASSESSMENT

While it is incumbent on the Bank's clients to manage the risks associated with their own operations, it is important to Societe Generale to evaluate the consistency of its engagements with clients against the E&S principles of the Bank.

Thermal power plants burn fossil fuels or biomass to generate electricity and heat. Contribution to global climate change through emissions of Greenhouse Gases (GHG) and especially CO2, which closely derive from the implemented technology, is a key environmental impact of the sector. In addition, there are a number of regional or local E&S risks potentially associated to the development of the different types of thermal power plant.

When evaluating clients' activity and/or transactions in this sector, particular attention is paid to the following aspects:

- Energy efficiency and GHG emissions:
  - Thermal efficiency of the power plant(s), which has a direct influence on both GHG and other air pollutants level of emissions.
  - Applicable regulatory framework regarding GHG emissions in the country or region where the power plant(s) are operated, including existing and reasonably foreseen regulations (emissions trading schemes, taxes, carbon capture and storage, offsets, etc.).
  - Development needs of the country and the feasibility of use of higher energy conversion efficiency technology of the same fuel type/ power plant size than that of the country/region average.
- Air emissions with a local or regional impact, in particular when they affect locations where air quality is already poor, from:
  - Fossil-fuel power at levels depending on the fuel type- including sulphur dioxide (SO2), nitrogen oxides (NOx), particulate matter (PM) and carbon monoxide (CO).
  - Waste incineration- including CO, NOx, SO2, PM, polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs).
- Water use and effluents discharge:
  - Impact of water extraction for cooling or desulphurisation operations.
- Waste and hazardous materials management.
- Noise.
- Facility siting and social context.
- Resettlement or economic displacement caused by loss of land or assets.

Environmental legacy of past operations such as soil contamination in the case of projects involving revamping or repowering, or where projects are being implemented on brown-field sites.

4. SECTOR-SPECIFIC STANDARDS AND CRITERIA

Societe Generale being active worldwide, the E&S laws and regulations its clients have to comply with vary from one country to another or one region to another. At a minimum, Societe Generale requests its clients to comply with the E&S laws and regulations of each relevant country, while encouraging them to apply the Bank's E&S standards.

A number of institutions and civil society organisations have developed standards and initiatives[1] addressing the E&S impacts resulting from the Thermal Power sector activities. The standards and initiatives listed below provide guidance for Societe Generale E&S assessment in this sector:

- The UN Framework Convention on Climate Change (UNFCCC), related protocols and agreements.
- The World Bank Group Environmental, Health and Safety Guidelines (EHS) for Thermal Power Plants.
- The World Bank Group Environmental, Health and Safety Guidelines for Waste Management Facilities.
- The EU Emissions Trading Scheme (EU ETS).
- The EU 2010/75/EC Industrial Emissions Directive (IED) and IPPC Bureau BREF documents covering Large Combustion Plants and Energy Efficiency.
- The EU 2008/98/EC Waste Framework Directive (WFD).
- The UNFCCC Modalities and Procedures for CO2 capture and storage in geological formations as clean development mechanism project activities (Appendix B[2] criteria as applicable).
- The Global CCS Institute Carbon Capture Storage Ready Policy.
- The World Resource Institute (WRI) and World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol.
- The CDP Climate Change Program.
- The WBCSD Global Water Tool for Power Utilities.
- The International Energy Agency.

Based on the analysis of these initiatives and of best practices of multilaterals, financial institutions and OECD Export Credit Agencies, Societe Generale has defined the following E&S criteria which are incorporated into its decision-making process when considering provision of banking and financial services in the Thermal Power sector:

a. Clients criteria

Clients are encouraged to apply the best E&S practices of the sector, and in particular to:

- Develop a strategy for carbon intensity reduction, including quantitative targets, and to publicly disclose the GHG emissions generated by their activities (for instance through participation to the CDP).
- Assess the water risks relative to their operations by using risk assessment tools (such as the WBCSD Global Water Tool for Power Utilities).

[1] These standards and initiatives may take the form of conventions, directives, standards, recommendations or guidelines…

[2] Additional requirements for carbon dioxide capture and storage project activities under the clean development mechanism

b. Dedicated transactions criteria

When conducting an E&S assessment of a transaction[3] in this sector, Societe Generale has the following requirements:

- Compliance with national and international law (and EU ETS when applicable) regarding GHG emissions in UNFCCC Annex I countries, and national GHG Strategy in other countries.
- For greenfield thermal power plants:
  - Compliance with International environmental standards such as the World Bank Group EHS Guidelines for Thermal Power Plants and Waste Management Facilities as applicable.
  - For greenfield thermal power plants combusting natural gas with a rated thermal input exceeding 100 MW per unit and that is not used as a peaking facility[4], compliance with Maximum CO_2 emission intensity of 561kg CO_2e/net MWh[5] would be expected to be verified during analysis or due diligence. Societe Generale favours the technological choice of Combined Cycle Gas Turbines (CCGT) power plants, which enables improved overall efficiency and reduced fuel costs.
  - For greenfield thermal power plants combusting coal, compliance with the Coal-Fired Power Policy.
  - For greenfield thermal power plants combusting biomass, compliance with the applicable criteria of the Renewable Energy Sector Policy (and of the Coal-Fired Power Sector Policy in case of biomass/coal co-firing).
  - For greenfield thermal power plants combusting waste, an evaluation of the energy efficiency based on international standards[6] and evidence that an appropriate waste selection has been applied to the power plant's feedstock.
  - For greenfield thermal power plants which are expected to emit more than 100,000 tonnes of CO_2 equivalent annually during the operational phase, an alternatives analysis will be conducted by the client to evaluate less GHG intensive options, and GHG emission levels will be quantified on an annual basis in accordance with internationally recognised methodologies and good practice[7]. For power plants combusting Heavy Fuel Oil (HFO) and Diesel (LFO) the alternatives analysis will confirm application to the project of best appropriate available technology[8] including fuel choice.
  - Societe Generale encourages the development of combined heat and power (or cogeneration) facilities, where relevant.
  - In countries where a regulatory framework has been or is being developed for Carbon

[3] See Implementation Process in Societe Generale E&S General Guidelines

[4] Peaking plants are power plants which are operated only at times of higher electricity demand (less than 50% annual load factor).

[5] If less stringent levels are appropriate in view of specific project circumstances, the client will provide full and detailed justification demonstrating that the choice for any alternate performance levels is consistent with the overall objectives of this Thermal Power Policy. This may be the case, for instance, for power plants combined with a desalination unit.

[6] For example the EU WFD formula

[7] Such as the GHG Protocol. In countries where such conditions are regulatory requirements, the analysis and/or reporting will follow the methodology required by the relevant process.

[8] Best appropriate available technology should be determined by taking into account economically and technically viable conditions in a specific region, by reference to techniques available on a scale which allows implementation in the relevant sector.

Capture and Storage, demonstration by the client that the power plant(s) is compliant with local regulations and can be considered as "CCS ready", according to the IEA definition[9].

- For transactions related to the financing of a CCS project or one of its components, an independent third-party assessment will confirm that the project is in line with the UNFCCC Modalities and Procedures for CO2 capture and storage in geological formations as clean development mechanism project activities (Appendix B criteria as applicable). These criteria are also applicable to CCS developments in the industry sector.

c. Equator Principles

In addition, Societe Generale applies the Equator Principles and its underlying standards to the transactions falling in the scope of this initiative.

Together with the criteria defined in the E&S General Guidelines and in the Cross-sectorial Policies, these standards provide the E&S framework used by Societe Generale to consider its involvement in transactions in this sector.

5. SCOPE

This Sector Policy applies to all the banking and financial services provided by the Societe Generale Group entities to its clients involved in the development, construction, operation or decommissioning of:

- Coal Fired Power Plants, in conjunction with the Coal Fired Power Sector Policy.
- Gas Fired Power Plants.
- Liquid fuel Fired Power Plants (HFO and LFO).
- Waste-to-energy (WtE) Plants, except facilities consuming only biomass waste, which are covered by the Renewable Energy Sector Policy.
- Biomass co-firing Power Plants, in conjunction with the Renewable Energy Sector Policy and the Coal Fired Power Sector Policy.
- Combined Heat and Power (Cogeneration) Plants.

6. IMPLEMENTATION PROCESS

As established in the E&S General Guidelines, Societe Generale integrates the assessment of potential E&S risks and impacts into its decision-making processes both at the client assessment level and, where necessary, at the transaction assessment level.

The development of these processes will take into consideration risks materiality and may be adapted to countries.

Societe Generale decisions are based on the information made available to the Bank. Societe Generale puts all its reasonable endeavours to ensure the quality and reliability of this information.

[9] The International Energy Agency's definition of CCS readiness includes that "Developers of capture-ready plants should take responsibility for ensuring that all known factors in their control that would prevent installation and operation of CO_2 capture have been eliminated. This might include: (i) A study of options for CO_2 capture retrofit and potential pre-investments, (ii) Inclusion of sufficient space and access for the additional facilities that would be required, (iii) Identification of reasonable route(s) to storage of CO_2."

7. SCHEDULE – REVISIONS

This Thermal Power Sector Policy is applicable from the date of its publication to all services provided therefrom.

Procedures will be put in place progressively, as necessary, throughout the Bank to ensure full integration of these requirements in the usual decision processes. Review mechanisms will allow for continuous improvement. Societe Generale reserves the right to modify this Sector Policy at any time. This document cannot be interpreted as a contractual commitment.

Updated versions will be posted on Societe Generale's website where the E&S General Guidelines and all published Cross-sectorial and Sector Policies are also available.

This Sector Policy has been established in French, versions in other languages are free translations.