

OPPORTUNITIES AND THREATS IN ACCESSION PROCESS: CEMENT SECTOR AND ENVIRONMENT CHAPTER

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Abstract

Negotiations with the European Union on Environment Chapter were opened at the 8th Meeting of the Accession Conference at Ministerial Level with Turkey on 21st December 2009.

This paper covers opportunities and threats for Turkish cement sector related to the alignment with the environmental acquis concerning major regulations.

Key Words: cement, environment, investment

INTRODUCTION

Negotiations on Environment Chapter were opened at the 8th Meeting of the Accession Conference at Ministerial Level with Turkey on 21st December 2009.

Main topics covered by environmental chapter can be classified as environmental legislation of the Union and horizontal issues such as; environmental impact assessment, accession to environmental information, climate change, air quality management, prevention of industrial pollution and risk management, water quality, waste management, noise, chemicals and biodiversity.

Turkish cement sector has many opportunities when compared to other industries in the country. However, the sector may have many technical, financial and market challenges in alignment with the environmental acquis.

OPPORTUNITIES

Turkish cement sector has incorporated "Sustainable Development" as an indispensable commitment and accordingly takes a leading role in all efforts to enhance the sustainability standards and mitigate the emissions in Turkey.

The sector is fully adopted to the European norms on production, environment, health and safety issues. Majority of the plants have quality management and environmental management systems (ISO 9001 & ISO 14000 certificates)

The sector had signed voluntary commitment agreements with the Turkish Ministry of Environment and Forestry related to fulfilling environmental responsibilities and monitoring beyond the current legislative limits. All the plants have dust reduction units and had secured all the permits on air, noise and wastewater.

THREATS

As per Turkey's program for alignment with the environmental acquis (2007-2013), new regulations are under preparation and some have already been revised.

Major topics closely related to the Turkish cement sector are: industrial emissions, incineration of waste as alternative fuels, integrated environmental permits, the Kyoto Protocol to the United Nations Framework Convention on Climate Change (UNFCCC), and Regulation on Registration, Evaluation, Authorization and Restriction of Chemical Substances (REACH).

Emissions

The EU Directive concerning Integrated Pollution Prevention and Control (IPPC) was adopted in 1996 and had to be transposed into the national legislation of EU Member States by 30 October 1999. This was also the date of application for new installations, while all existing installations had to fully comply by 30 October 2007.

This Directive requires industrial and agricultural activities with a high pollution potential to have a permit. This permit can only be issued if certain environmental conditions are met, so that the companies themselves bear responsibility for preventing and reducing any pollution they may cause.

The Industrial Pollution Prevention and Control Directive is currently under revision (recast) together with six other directives, including the Incineration of Waste Directive. This process will eventually lead to the recasting of these Directives under one single Directive, the Industrial Emissions Directive..

Decisions that set permit conditions outside Best Available Techniques (BATs) can only be taken in specific cases and need to be justified and documented. T Significant improvements in Member States' performance are expected as a result of basing the granting of permits conditional on Best Available Techniques (BATs). The EU cement industry advocates that that the emission values that can be achieved by the BATs can not be applied as emission limit values. Thus, this point will be point of major concern.

As an energy intensive industry, the cement industry has been trying to combine energy efficiency and the need to preserve non-renewable energy and non-energy resources. This is where the use of waste, both as alternative fuels and raw materials, comes as a major breakthrough. In the EU, cement plants use waste as alternative fuel as per the Incineration of Waste Directive. In Turkey the level of thermal substitution is about 1 % which is very low when compared the 18 % of the EU.

Concerning the industrial emissions and alternative fuels, alignment will require national legislation in line with the IPPC Directive and Incineration of Waste Directive.

In order to comply with the new limit values, Turkish cement plants will have to realize investments mainly for reducing the stack gas nitrogen oxide and dust emissions, as well as closing storage halls. As an example, in Turkey, limits for the nitrogen oxides is 1300 mg/Nm³ for existing plants and 800 mg/Nm³ for new plants. In case of waste incineration it is supposed to be 800 mg/Nm³ for existing and 500 mg/Nm³ for new plants. However, the IPPC Best Available technology can achieve a limit value of 200 mg/Nm³ which requires DeNox units (about 2 million Euros/plant) or sometimes technically impossible to comply with.

These investments will require time and financing. As mentioned above, the IPPC Directive was adopted in 1996 and had to be transposed into the national legislation of EU Member States by 30 October 1999. This was also the date of application for new installations, while all existing installations had to fully comply by 30 October 2007.

EU Integrated Environmental Harmonization Strategy (IEHS) was prepared with the participation of related institutions in the coordination of the Turkish Ministry of Environment and Forestry. According to IEHS, total investment requirement between years 2007-2023 is 58.6 Billion Euros and 14.78 Billion Euros of this cost is estimated for investment need for prevention of industrial pollution. Thus, the share of the cement industry is supposed to be 2-3 Billion Euros.

Green House Gases (GHG) and the Kyoto Protocol:

As mentioned before, cement industry is energy intensive and has a share in GHG emissions of the World.

In the cement sector, major step in reducing GHG emissions is to improve energy efficiency. In this regard, investments of the Turkish cement industry have been completed in order to improve technical coefficients, in particular those related to the energy saving.

Shared vision of the Turkish cement industry is “to mitigate the emissions without causing a reduction in cement production and consumption volumes without jeopardizing the Country’s Economical Growth and Welfare Prospects”.

However, the EU's climate and energy policy sets the following ambitious targets for 2020:

- Cutting greenhouse gases by at least 20% of 1990 levels (30% if other developed countries commit to comparable cuts)
- Increasing use of renewables (wind, solar, biomass, etc) to 20% of total energy production (currently ± 8.5%)
- Cutting energy consumption by 20% of projected 2020 levels - by improving energy

The EC Communication 28/01/2009 “Towards a Comprehensive Climate Change Agreement in Copenhagen” requires emission reduction commitments for at least all countries listed in Annex I to the UNFCCC, all OECD member countries and all current EU Member States, EU candidate countries and potential candidates. Thus, as an

Annex-I country and a potential candidate, the EU expects Turkey to undertake emission reduction commitments.

Turkey's official submission to the UNFCCC indicates that the GHG emissions of Turkey increased by more than 100% since year 1990. Thus, an emission reduction commitment like the EU means a %120 reduction in the GHG emissions which is physically impossible. Thus, it is possible for Turkey is to reduce emissions from Business As Usual.

In case the alignment requires heavy GHG emission reductions, Turkey will be prone to "carbon leakage". The term "carbon leakage" was invented to prevent an installation from being moved outside Europe if a production installation's cost increases and competitiveness decreases as it pays for its emissions based on the environmental legislation effective on European territories and to take measures against it.

REACH Regulation

REACH is the abbreviation for the new EU regulatory regime for the registration, evaluation, restrictions and authorization of chemicals

As per the regulation any substance manufactured or imported in the EU above 1 tone must be registered by the entity that imports or manufactures it, unless it is exempt from registration.

Turkish cement producers exporting cement to the EU is subject to REACH registration by 01.12.2010 if the cement includes certain substances (i.e. chrome reducing agents, granulated blast furnace slag, synthetic gypsum or grinding aids) or use the products of vendors that has already registered their products.

The REACH regulation is 280 pages with many appending guidelines proposes a very complex system. The system also requires fees and test etc. The compliance period in the EU changes from 3 years to 10 years as per the production rate.

Thus, alignment with the REACH Regulation into national legislation will require transition periods at least 5 -10 years.

CONCLUSION

As per Turkey's program for alignment with the environmental acquis (2007-2013), new regulations are under preparation and some have already been revised.

These regulations will require investment and incur costs for the industry. Thus, transition periods at least 5 -10 years and financial supports is very important concerning the compatibility of the Turkish cement sector.