THE SIXTH FRAMEWORK PROGRAMME
for Research, Technological
Development and Demonstration

ALF-CEMIND

Supporting the Use of Alternative Fuels in the Cement Industry

Specific Support Action

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CEMENT INDUSTRY IN TURKEY
LOGISTICS AND STRATEGY

EXECUTIVE SUMMARY

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EXECUTIVE SUMMARY

The forecasts made for the Turkish Cement Sector in the Ninth Development Plan of Turkey which is prepared by the State Planning Organization and accepted by the Parliament shows a smooth development in the sector. Expected performance within the Sector for the coming 7 year period, as drafted by the Special Cement Committee shows that there will be no imports for the period and the Sector is expected to be self sufficient in raw materials. The domestic demand will increase 4,68 percent annually where the production will increase 2,95 percent, and exports will decrease 17,08 percent in cement and 6,65 percent in clinker. In the same period it is estimated that a 20 million tons capacity will be added to the present cement production capacity. This amount goes up to 21 million tons as clinker capacity. This increase in the capacity will be realized across the country rather than in certain regions.

The cement production is an energy intensive process and the Turkish cement sector is one of the top three consumers of energy. Within the sector itself, the priority should be given to the reduction of the energy and the electricity consumption, the utilization of the energy efficient technologies, the use of alternative fuel resources and the utilization of the new alternative raw materials in addition to research and innovation efforts both in the fields of the alternative fuels and the alternative raw materials.

A major technological change is not expected in the next period due to the present high technological level of the industry. On the other hand the industry should complete the environmental investments and be ready to confront the environmental limits for competitiveness where the European producers are obliged to apply.

The major roadblock for the wider use of alternative fuels is in the legal framework. When compared with the EU experience, the present legal infrastructure in Turkey is to say the least, quite inadequate. In order to overcome this problem, the bottlenecks should be clearly identified and the legal framework should be completed immediately. Another significant issue lies with the proper definition and treatment of the industrial waste.

Even tough in the negotiations with the EU, Turkey has not been requested to implement a common environmental regulation, the national environmental and air quality control regulations are strictly followed up by the industrialists in the Sector. Still they will face a considerable investment in dust prevention and adjusting themselves to the laws and regulations on water, soil, waste i.e.

A realistic roadmap for the Cement Sector will include the following steps:

1. **Completion of the primary legal framework for the use of waste materials as an AF and ARM in the Cement Sector.**

2. **Proper definition of the industrial waste materials and their paths of disposal including proper use for the Cement Sector.**

3. **Preparation of the secondary legislature on the provision, distribution and transportation of the proper industrial wastes to be used as AF and ARM, the emission standards and the other technical issues.**

4. **Setting up an incentives program and providing funding for the infrastructure investments for alternative fuels and energy efficiency in the Cement Sector.**

5. **Establishing a financial mechanism for efficient collection of waste. Establishment of soft loans through already existing mechanism to SMEs (such as SME Support Fund) can help the development of SMEs in this field which will end up with a considerable economic payback.**

6. **Carrying out research and development projects on the candidate AF and ARM materials with special emphasis on the municipal wastes, blast furnace slag and fly ashes from the pre-determined power plants.**

7. **Establishing an efficient cooperation between cement plants and municipalities. A model project should be developed by the support of the related public institutions and the ministries.**

8. **Energy Efficiency Benchmarking Studies should continue in the sector to give the opportunity to compare the energy consumptions of the plants and to lead to more investments in the energy conservation and efficiency in the Cement Sector.**

9. **Changes should be made in the Import Regime in order to overcome the insufficiency in the supply of the waste raw material to the cement industry.**

A rough estimation on the level of investment needed at the first stage in the Cement Sector in Turkey gives a figure lower than a billion EURO to lead a considerable energy efficiency and use of waste in the sector.

Considering the technological level reached in the sector, the next step for Turkey should be to become a “global player” and export her know-how.