



Europe's Environmental Challenges in Difficult Economic Conditions

Michael Herson,
The Strategy Works, UK,
talked to four leading
European manufacturers to
discover how they are coping
with the recession, the
growing threat of imports and
the environmental challenges
posed by phase 2 of the
EU's carbon ETS scheme.

Introduction

In this article, manufacturers operating plants within the troubled eurozone region reveal the progress being made in achieving environmental targets for key areas such as alternative fuels, whilst coping with the growing threat of imports. With rights allocations not fully taken up in 2011, how will that impact on the broader global CO₂ picture?

Alternative fuels

Italcementi, which operates plants worldwide with key operations in Italy and Egypt, has a broad portfolio of alternative fuels such as scrap tyres, dried sewage sludge and RDF (refuse derived fuel). Manuela Ojan, Climate Protection Manager of Italcementi explains: “RDF is very safe for burning in cement kilns; it’s more and more common all over Europe.” Rob Van der Meer, Director of EU Public Affairs for Global Environmental Sustainability at Heidelberg Cement confirms that RDF is the company’s major alternative fuel, and adds that sewage sludge from one-off treatment plants is also important.

Lafarge uses a mix of RDF, oils, solvents and tyres, with RDF the company’s fastest growing alternative fuel. In developing countries the company utilises more agricultural biomass, such as rice husk and coffee husk alongside RDF extracted from municipal waste (as opposed to commercial or industrial waste) depending on the country in question. Vincent Mages, Vice President of Climate Change Initiatives at Lafarge confirms that the company has now reached 15% usage of alternative fuels and by 2015 this is likely to double to 30%.

Lafarge highlights the importance of working alongside local waste management companies. This policy is endorsed by Van der Meer, who is careful to point out that “the cement industry is not a waste incinerator; we have quality restrictions on the outputs, not just air emission quality and CO₂ but also on bromine, fluorine, POPs, heavy metals, etc.” He stresses the importance of stability: “Imagine RDF coming into the plant that one day has a sulfur content of 5% and the next day only 1%. That is a big difference that a kiln can’t cope with.”



The Thessaloniki plant (courtesy of Titan).

At present, RDF is just not available outside Europe according to Van der Meer. He anticipates greater use of sewage sludge but feels local alternative fuel strategies are country specific. “We are exploring at a local and regional level the possibilities of finding new waste materials, but you can’t copy that easily from, say, southern Germany to Norway, because the waste materials that we use in northern Europe are not available in southern Germany.”

Alexandros Katsiamboulas, Environmental Manager of major Greek supplier, Titan, explains that, despite the economic crisis in Greece, Titan is committed to reducing its carbon footprint by increasing the usage of alternative fuels to include whole tyres, refinery sludge mixed with sawdust and, most recently, dry sewage sludge from Athens municipal waste water treatment. Titan has already conducted trials for RDF at its Kamari plant in order to agree an initial specification. Titan has built a facility to burn biomass at its Thessaloniki plant but is awaiting an environmental license to use these new alternative fuels.

The company has also just started using RDF in Bulgaria in 2011 using pre-sorted waste material from the municipality of Sofia. “We built a waste management treatment plant on the site of Zlatna Panega Cement Plant, and they are producing RDF to use it in the kiln,” confirms Katsiamboulas, who also wants to encourage the newly planned Greek RDF plants to meet the specifications required by their cement plants.

Clearly the cement industry needs to work more closely with the waste management industry to produce to the specifications they require, but the initial evidence is encouraging.

Clinker substitution

Substitutes for clinker are not so obvious according to Van der Meer, who says: “We don’t see clinker being substituted completely by another material; we don’t think it is available”. Ojan feels this is also country specific. “Traditionally, in countries like Italy and Greece, we use blended cement, so cement with low clinker content, but in other countries the standards limit the use of blended materials for broad usage”. Ojan confirms Italcementi has an average of 20% replacement clinker within its mix.

Lafarge uses pozzolan, sourced from volcanoes, in its African countries. Mages says this mineral was used in Roman times and can be used as a cementitious addition: “A good cement is a recipe, it’s a good balance of different types of clinker, the different fineness of clinker, different additives, the way you mix, the size of particles, etc.”

Phase 2 Rights Allocations – relative to current cement demand

Ojan of Italcementi confirms that the market situation in southern Europe is “bad” and “sees no recovery in 2012”. Consequently, Italcementi is not using all its rights allocations of CO₂. But she also expresses concerns about vulnerability to imports in the current economic climate: “I think they should keep the existing rules, because we have free allowances and are vulnerable to importers. Production and the production capacity in the nearby countries that are not European is increasing, so they will try more and more to export towards Europe, but if we keep free allowances we can still resist the imports.”

Van der Meer of Heidelberg agrees that when the system was conceived, it was not prepared to deal with the economic



The tower at Matera Cement Plant (courtesy of Italcementi).



Galusco d'Adda, (Bergamo) Cement Plant (courtesy of Italcementi).

downturn: “What the present crisis shows is that a system based on historical production volumes is not a very fair system, because the countries that are having a crisis will have more allocations available for funding than countries where the market is booming. In this case the cement industry is in principle punished and where the market is slowing down, in southern Europe especially, the CO₂ trading results show that everyone has an overlong position.”

In the worst hit market in southern Europe, Katsiamboulas reports that the unprecedented decline in Greek construction activity has continued. The increasing political and economic uncertainty has translated into a steep decline in demand for building materials in both the private and public sectors.

CO₂ impact from cement/clinker imports

Van der Meer believes that the current scheme operates unfairly and explains his views with an example: “Imagine that you have used your free allocation completely for a plant that is producing cement and you want to increase your production. In that situation you have to cope with the CO₂ price of €30, meaning you have to increase your cement price by €24, and that on a European level is about a 40% increase of the price of cement, so it's really significant. Now on the other hand, an importer is not constrained by CO₂ so he can sell that same cement for its cost price in China without any CO₂ costs. Only transport will be added, but €24/t is not the

transport costs, the real costs are €10, perhaps €12 – 15/t. So it means, from the perspective of an importer, it's always beneficial to import cement or clinker into Europe.”

Lafarge also sees flaws in the scheme. Mages quotes from a think tank in the UK – Policy Exchange – which published a paper a year ago “[...] showing that some countries in Europe, including UK, France and Germany, are claiming for CO₂ reductions over time, but only for the CO₂ emissions from their own domestic production; the fact is that those countries are importing more and more products, meaning that in fact their CO₂ is increasing over time.”

Katsiamboulas of Titan describes this problem as ‘carbon leakage’. “Carbon leakage means that cement or clinker from countries outside the European Union, that is being produced without strict environmental restrictions on CO₂, can be imported into the European Union at very low cost. So there is a risk that European Union cement production will be relocated, while at the same time CO₂ emissions at a global level will remain the same without any result to combat climate change.”

Katsiamboulas foresees a problem looming in the next period of the EU-ETS scheme: “This will be a risk mainly for the next period, 2013 to 2020, because the allowances will be severely reduced in the forthcoming period. It doesn't matter if the CO₂ is emitted in the European Union or Turkey; the effects on the universal climate change are the same. Our concerted actions against climate change should be global.”

Mages also believes that importers should be included in the scheme. “Including the importers into a scheme such as ETS makes a lot of sense, because it can reconcile production and consumption. Also, it has a very positive effect because it motivates the importers to calculate their own emissions very tightly; so it's a way for Europe to expound the positive side of ETS to non-EU countries, to lead by example,” says Mages.

Van der Meer also feels the current scheme is unfair: “It can't be that the cement produced in China or North Africa or Turkey is not constrained by CO₂ limits and exported into Europe, when cement is no longer being produced in Europe. This is, in fact, financing competitors out of Europe, including ourselves. We also have plants in China, in India, so we also could produce the clinker in Turkey, sell it to Europe, as any international company could do.”

Conclusion

The evidence is that the cement industry, despite the recession, has not slowed down its efforts to improve the usage of alternative fuels – in fact quite the reverse. They seek and expect closer co-operation from the waste management industry to produce to specifications that are most suitable for efficiently firing the kilns.

But as phase 2 of the ETS scheme nears its end, the industry is strongly questioning how unregulated imports produced by countries that are not part of the EU's scheme can possibly contribute to the reduction of overall global warming targets. This is clearly an issue for consideration by the Commission when framing phase 3 as, in respect of global warming, the EU is not an island. 🌍

Note

This article has been prepared by Michael Herson of London based The Strategy Works – a strategic marketing consultancy specialising in original business to business insight on a global basis. For more information, visit: www.thestrategyworks.com.