



The Finnish chemical industry has committed to support the goal of reducing the greenhouse gas emissions in Europe by 20% by the year 2020.

Chemical Industry Facing Challenges

■ The chemical industry is the key in finding solutions for energy and climate issues and in determining sustainable use of natural resources. The Responsible Care Programme has proved that the industry is really committed to the EHS work and goals.

Aimo Kastinen

Appropriate and cost-effective regulations promote business operations. The current decade has brought—and will bring more and more—new regulations the benefit/cost ratio of which should be reviewed critically. Already at the moment it is obvious that the industry does not attract as many new investments as earlier. Regulations and especially several projects increasing costs within a short period of time affect this development as well.

The energy tax reform effective from the beginning of the current year increased the taxation of fuels, gas, and electricity. The electricity tax in the industry is ten times higher than the tax level permitted by the EU. In our main competing countries the basic industry is paying in practice the lowest tax allowed by the EU—in Sweden, the level is even below the minimum if the company is committed to follow the energy efficiency system. Compensation systems are necessary for preventing carbon leakages.

New period of emission trading starting

The third emission trading period starting slightly over a year away differs significantly from the previous ones. Energy production is not provided free quotas any more, and also the quotas for industry have been cut significantly. The price level of quotas to be auctioned can rise high for these reasons and, in addition, due to the fact that Germany has decided to give up nuclear power and probably must thus compensate for the smaller capacity with fossil fuels.

The chemical industry plants operating in Finland already within the scope of emission trading can continue their operations in the third period and approximately half a dozen new plants

will be included as well. However, the most significant additional cost for the whole industry is caused by the energy companies transferring the costs of acquiring emission quotas to their customers.

In addition to the direct costs the customers must pay the windfall addition of the Nordic power exchange. According to cautious estimates, the additional cost for the chemical industry would be over 100 million euros on annual level. The main part is targeted at the energy intensive export industry.

The European Union Emission Trading Scheme provides the possibility to nationally compensate for the unreasonable costs caused to the industry by the emission trading. At the moment, the Commission is preparing instructions that provide guidelines for acceptable measures of compensation. The instructions must deal with the acceptance criteria that are difficult to define.

In the next stage the decisions will be made on national level. The lack of positive compensation decisions would first endanger the investments of basic industry and then even the continuity of the operations on the current level in the EU.

From energy efficiency to material efficiency

The fastest and most effective way to influence the use of energy and greenhouse gas emissions is to boost energy efficiency. The industry operating in Finland has committed to boost its energy use by the year 2016 by 9%. The largest potential, however, can be found within the sectors of municipalities, state, traffic, construction, services and consumers. On national level, progress is made in all these sectors.



Reach and CLP Keep the Chemical Companies Busy

The first registration phase of Reach regulation was very demanding and expensive. Most registrants, however, were large companies which had experience and resources for managing the necessary administrative tasks. The situation will be different especially in the third phase in the end of the decade.

The Reach and CLP regulations also require companies to draw new material safety data sheets, labellings, and classifications of substances. The European Chemicals Agency has drawn thousands of pages of instructions for interpreting the regulations. In addition to the complicated legislation, even more complicated instructions seem to be causing further challenges.

Until now the manufacturers and importers have had the prime responsibility. Downstream users must next modify the hundred pages long data sheets and other materials from their raw material suppliers so that they are suited for their own customers. At the same

time they must monitor the possible classification of the raw materials as SVHC substance and other obligations brought by the new legislation.

The Chemical Industry Federation of Finland supports its member companies and their experts by providing them regularly more information on new interpretations and it also organises several training days annually. Networking provides also the experts in large companies the possibility to effectively increase their own knowhow.

Seveso III being prepared

The Seveso II Directive on the control of major-accident hazards is being renewed. Although the renewal was supposed to be limited to technical details, the Commission stated other changes in its own proposal.

It seems that there will be new small

and medium sized companies within the scope of the regulation some of which will be difficult to see as causing major-accident hazards. The Commission would also be given the power to widen the scope of application without any Parliament or Council hearing. The informing obligation of the environment would be wider.

The basis of the decisions lies in the Aarhus Convention that has never before been applied to such large extent. The Commission would require annual inspections in Seveso plants, whereas today the authorities have been able to select the schedule for inspections on the basis of the estimated risk. National authorities would need to report to the Commission on their operations very frequently.

This proposal has gained surprisingly strong criticism from the member states. Industry and national authorities have in several places pointed out the same change needs.

▶▶▶ The products of chemical industry enable cutting down the energy use of the whole community. The companies in chemical industry have estimated that one unit of energy used in the chemical industry can reduce the customer's energy use by two units.

The use of energy in chemical industry has intensified constantly. The most significant reductions have been made already in the past decades, but new ways of boosting, however, have been found. From the autumn onwards the Chemical Industry Federation of Finland promotes the energy efficiency in small and medium industries with the Cefic's Care+ programme providing energy efficiency guidelines.

Next, new solutions are searched for in the fields of material and energy efficiency. The sustainable use of natural resources and the critical review of material flows are parts of the sustainable development projects in chemical industry. The Chemical Industry Federation has selected material efficiency as its area of focus in the Responsible Care programme.

Current goal of the climate policy is sufficient

The chemical industry has committed to support the goal of reducing the greenhouse gas emissions in Europe by

20% by the year 2020. The decrease of 30% proposed in the EU is not considered justified.

Firstly, the emission trading already with the current boundary conditions means the price of electricity rising to a completely new level which would without compensatory procedures mean the realisation of the risk of carbon leakage. Secondly, any new goal is inefficient when reviewing the time after the year 2020 unless the rest of the international community adopts the same goals. Thirdly, the changes at the start of the emission trading in 2013 bring more

insecurity to the markets.

Now the focus must be shifted from the current decade to long-term planning. Both in the EU and on a national level openings have been presented, with scenarios extending to the middle of the century. The chemical industry is an active partner in these plans and it offers chemical technology solutions for the challenges presented. □

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Enforcement of Reach

Did We Succeed?

■ **How have we managed on the enforcement of the Reach regulation so far? The first registration phase for phase-in substances came to an end on 30 November 2010. What was the outcome of the first Reach deadline?**

European Chemicals Agency (Echa) received 21,000 registrations covering about 3,500 phase-in substances. Large companies made 86% of all registrations.

The European Commission, Echa, and European Chemical Industry Council (Cefic) were happy with the results despite Echa receiving fewer registrations than expected.

Finland was in ninth place in the European Economic Area (EEA), with 550 registrations. The number was higher than expected, and we considered the first deadline successful. One reason for Finland's high number might be that we had many registrations made by Only Representatives (OR).

The situation was very similar with classification and labeling notifications in the beginning of January 2011. While Echa received about 3.2 million notifications, the number was again slightly lower than expected.

Silence after June

The third deadline, 1 June 2011, concerned notifications of substances of very high concern (SVHC) in articles. Echa received 175 notifications by the deadline. All stakeholders have been very silent about the outcome.

These notifications were the first obligations of the Reach regulation, which were mainly extended outside the chemical industry. It covered new players, like producers and importers of articles, quite many of which are small and medium sized enterprises (SMEs).

Since most of our articles are manufactured outside the EEA, obtaining information on substances of very high concern is often difficult.

The next registration deadline, 1 June 2013, is less than two years away. Only limited activity has so far been observed in the Substance Information Exchange Forums (SIEF), where the new registration submissions are prepared.

Echa is expecting the registration of about 3,500 substances. This huge workload is falling on the manufacturers and importers of involved substances. There will also be less test data and information on the uses of available substances and many more SMEs will be involved in the 2013 registrations.

Based on experiences from the first registration this also means that cost sharing will be more difficult for the companies involved, as total costs of registration are relatively more important to smaller companies. To be ready before June 2013 companies should start preparation of the next registrations immediately.

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◀ **In the next phase of the implementation of the Reach regulation, European Chemicals Agency is expecting the registration of about 3,500 substances.**