

CLEANER TECHNOLOGY - SUPPORT MEASURES AND REGULATORY EFFORTS

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Denmark has been one of the proponents for cleaner technology as a way to overcome industry hostility to environmental policies arising from pure command and control measures and to make industry and business in general more competent and interested in environmental protection measures. By supporting the identification of cleaner technology options and by introducing cleaner technology to industry as a way of establishing a positive and cooperative climate between regulators and companies, Danish government has been a frontrunner both in the national and international context. This has been building on a simple PPP scheme (Pollution Prevention Pays) of thinking, although this has been used in policy rhetorics. The economics of CT is not that simple can be shown by studying industry activities.

The CT policy has been supported by a new group of professionals (engineers and environmental technicians) that have been engaged in the environmental protection issues and have been working crossing the boundaries between companies, consultants and regulators. The success of CT policies seem to be closely linked to this group of professionals and their ability to create both confidence and credibility for environmental protection issues.

The CT programmes supporting both innovation and implementation of CT in industry and service were in the first phase established as a supplement to the traditional control regime of environmental regulation. Business was not to be threatened, but to be supported in professionalising and extending their knowledge base and including environmental performance into their core production knowledge. Evaluations have shown that this strategy has been very successful, but also had its limitations concerning the impact on the environment. From ideal measures of reduction beyond the 90% level, the realised reductions were around 25-40% not because the results in the single projects were not promising, but because the implementation throughout industry was not complete.

These findings point to a problem that also has shown to be more difficult than expected: how to include the CT-options in the day to day pollution permits and regulatory efforts of government. Green buyers guides etc. are part of a market driven strategy, but the control element going beyond the traditional environmental standards as developed in the control regime, is still lacking measures and legal support. This change from one regulatory regime to another or eventually to a combination of regimes is quite difficult. Especially because the knowledge base among regulators has to be strengthened and renewed and because the specific

methods need to be clarified. The IPPC directive of EC is in fact not too helpful in this respect, as it continues the division between traditional environmental standards and the new best available technology measures.

Besides the need for integration of the CT strategy and the regulatory activities, the later years has also included a change in focus so that product development based on green innovation measures and life cycle analysis has been given higher priorities.

The analysis in this paper will draw on studies of regulatory regimes and their methodologies and knowledge implications, on implementation studies, on studies of company behaviour and on the changing agendas of the CT strategies. It shows the need for rethinking environmental regulation after the first introduction of cleaner technology policies - a rethinking that is still not showing in changed environmental legislation and thereby in the traditional and still dominant regime in environmental regulation.