



*Insights in Political Processes on the
Ecological Tax Reform from a
Ministerial Perspective*

**FÖS-Diskussionspapier Nr.
GBG Discussion Paper No.
Juli 2005/ july 2005**

2005/06



FÖS-DISKUSSIONSPAPIER NR. 2005/06
GBG DISCUSSION PAPER No. 2005/06

Kai Schlegelmilch¹

INSIGHTS IN POLITICAL PROCESSES ON THE ECOLOGICAL TAX REFORM FROM A MINISTERIAL PERSPECTIVE

INHALT

A.	Deutsche Zusammenfassung	2
B.	Abstract	2
C.	Introduction	2
D.	Comparison of Policy Approaches and Instruments	3
E.	History of ETR	7
F.	Design and Implementation of the ETR in Germany	9
G.	Experiences with the ETR in Germany	10
H.	Conclusions	13
I.	References	13

Beiträge der FÖS-Diskussionspapiere liegen in alleiniger Verantwortung der Autoren und stellen nicht notwendigerweise die Meinung des FÖS dar.
The authors of the GBG Discussion Papers are solely responsible for the contents which do not necessarily represent the opinion of FÖS.

Der Förderverein Ökologische Steuerreform e.V. tritt als überparteiliche Organisation für eine Ökologische Finanzreform ein, deren Kernstück die Ökologische Steuerreform bildet, zu der aber auch andere ökofiskalische Instrumente gehören wie etwa der Emissionshandel oder der Abbau umweltschädlicher Subventionen.

Landsbergerstr. 191 · 80687 München · Fon 089-520 113-13 · Fax 089-520 113-14
foes@foes.de · www.eco-tax.info

¹ I am most grateful for very valuable comments from my colleague Astrid Harnisch on a draft version of this paper. Florian Keppler also kindly made helpful remarks on a draft version. This article is written on the author's private capacity and must not be associated to any institution.

A. DEUTSCHE ZUSAMMENFASSUNG

Zunächst beschreibt und vergleicht das Papier die Entwicklung – in der Theorie – und die Einführung in der Praxis von mehreren marktwirtschaftlichen Instrumenten, unter anderem der Ökologischen Steuerreform (ÖSR). Zweitens bietet es Einblick in die Geschichte und mehr als 20 Jahre andauernde Debatte einer potentiellen ÖSR in Deutschland. Drittens beschreibt und analysiert es die Ausgestaltung und die Implementierungsphase der ÖSR in Deutschland im Jahr 1999. Viertens werden die zahlreichen und ambivalenten Erfahrungen mit der ÖSR vorgestellt. Zum Schluss werden Schlussfolgerungen für die politische Abwägung, das Design und die Einführung sowie das Marketing gezogen.

2

B. ABSTRACT

Firstly, the paper describes and compares the evolution – in theory – and the application in practice of various market-based approaches and instruments, inter alia the Ecological Tax Reform (ETR). Secondly, it provides insights in the history and the more than 20 years of debate on a potential ETR in Germany. Thirdly, the design and the phase of implementation of the ETR in Germany from 1999 on are described and analysed. Fourthly, the manifold and ambivalent experiences with the ETR are presented. Finally, conclusions for political considerations, design, implementation and marketing aspects are drawn.

C. INTRODUCTION

This contribution refers to the two articles from a) Gebhard Kirchgässner and b) Friedrich Schneider/Hannelore Weck-Hannemann in this volume. These articles aim at describing the political economy of the Ecological Tax Reform (ETR) from a mainly theoretical point of view and comprise illustrative elements from practice. In what follows, these articles are contrasted with experiences and practices the author has gathered during more than a decade. Half of the time he spent at the Wuppertal Institute, partly also at the European Environment Agency, himself as policy advisor on that topic. For the last six years, however, he worked with the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (www.bmu.de). There he is Assistant Head of Division in the Working Group on Environment and Energy, Climate Protection Programme of the Federal Government and responsible for the ETR. He has been very much involved in the discussion, design, decision making, implementation and marketing of the ETR in Germany, introduced in April 1999, half a year after the change of government towards a red/social-democratic-green one.

Yet, as policy advisor at the Wuppertal Institute he had already been involved in advising the previous conservative-liberal government in 1995. Together with Ernst Ulrich von Weizsäcker, Henner Ehringhaus, Anselm Görrer and others he founded the association Green Budget Germany (Förderverein Ökologische Steuerreform – www.eco-tax.info) back in 1994 to promote and accelerate the implementation of an ETR in Germany, since 2001 he is Vice-President. The following article is written on his personal capacity.

This article presents several experiences with the ETR in Germany, partly taking into account other countries' experiences, highlighting interesting examples in the context of political advice and political economy. The history and the experiences with the implementation of an ETR demonstrated that there were different waves of public debate and also of policy approaches and instrument choices. Industry successfully delayed effective government actions as soon as its initially own demand for more market-based instruments came too close to implementation. It followed a policy approach hopping from one instrument to another mostly just before implementation became serious. The policy sequence started from command-and-control with ordinances and regulations, going on with environmental agreements and taxes and finally emissions trading. However, not accepting industry's own target under the environmental agreement when it came to nailing down a target for the emissions trading caused enormous damage to the credibility of environmental agreements. Given this experience, it remains to be seen to what extent governments are still willing to accept such agreements.

Policy advice on ETR was particularly critical in the phase of gaining political support before its implementation, but also after its implementation when further improvements had to be made. However, given the brain drain after the change of government, and the many studies beforehand made government less dependant on policy advice in the implementation phase in this special case. It is not easy to generalise the process and explore the lessons learned in order to help other countries which are also working on the implementation of economic policy instruments. Every country has a very special set of actors including the influence of certain people as it is explained for the German case in this paper. It is, however, important to really bring together different actors from the political parties, the bureaucracies, scientific institutions, industries and environmental NGOs with their counterparts in other countries to allow for creating a good network and for ensuring that the same "language" is spoken by the stakeholders. Such a transfer e.g. was agreed between the Czech Ministry for the Environment and the German Ministry for the Environment back in 2002. This successful approach is about to be enlarged to other countries.

D. COMPARISON OF POLICY APPROACHES AND INSTRUMENTS

In current climate policy at least four seemingly competing policy approaches and instruments² are often discussed and implemented, although at partly different stages and times: ordinances/regulations as an element of a traditionally dominating command-and-control policy, environmental agreements, emissions trading and ETR. All of them are often part of overarching policy programmes, such as the climate protection programme. Several countries have introduced different approaches and implemented different instruments to various degrees. The evolution, in theory and practice, of these approaches and instruments is yet very different and it is of practical and theoretical interest to compare these different paths of development. In the following I will therefore first of all explore the use of policy approaches in Germany regarding climate change taking into account sequences and mixes of different policies. More concrete data and examples are provided in the next chapter on the historical aspects.

² The terms policy approach and instrument are partly used synonymously.

Traditionally, since the launch of active environmental policies in the late 1960s, environmental policies have been dominated by more or less strong regulations and can therefore be characterised as command-and-control policies. Environmental agreements were introduced at a later stage. They were basically invented by the bureaucracy and the political decision makers, more or less jointly with industry. First introduced in the 1970s for some particular, relatively clear cut problems, they were also used from the late 1980s, early 1990s on to combat global problems such as the depletion of the ozone layer and climate change. The following remarks refer basically to agreements on climate change. Before they were implemented there was hardly any theoretical economic literature on such agreements providing a rationale for their application. Also, policy advice virtually was not existing, given there was no real theory about different policy approaches in this area. So why did bureaucracy invent and apply such an instrument unknown or at least neglected in theory?

One may argue the instrument reflects some features of the Coase Theorem (Coase, 1960) given the element of seemingly voluntary negotiations. This may be true to a certain extent, but here it is government itself as one of the stakeholders and not two other subjects of society. And would bureaucracy really care about Coase and theories? The thesis presented here is that bureaucracy invented this instrument, because the phase of pure command-and-control policy was gone while an increasingly stronger demand for so-called market based instruments had emerged. In fact, it was industry itself which claimed that there should be less command-and-control environmental policies, but more market-based instruments in order to achieve targets cost-efficiently according to market mechanisms. This claim was made during more than a decade in the 1980s and early 1990s without substantial changes in the real instrumental mix.

However, there was one important exception which is the waste water charge. The idea for this instrument first came up in Germany around 1971, (BMI, 1974), following examples of then Czechoslovakia, the then German Democratic Republic, France, the Netherlands, Poland and Hungary (Lühr, 1989: 432). They had adopted this instrument, still some only on paper. In 1974, the German government drafted a law, which was adopted in 1976, and entered into force in 1978. Still, the first payment of the charge was due only in 1981, progressively increasing to its initially agreed full amount until 1985 – quite a long way from the first draft law to its interim final full rate. Later on further increases were made.

Apart from this exception, it took some time until finally in the mid-1990s industry's demands were taken more seriously and market-based instruments such as the ETR were intensively discussed, designed and gradually became more likely to be implemented. And just as a market-based approach became more concrete and at the edge of implementation, industry changed its positions and asked for more flexible approaches and instruments. This appears a bit surprising, although not really if the real interests are considered. With such instruments emerging on the political horizon, practically most of the negotiation power of industry would have gone which industry had during the mostly comfortable times of command-and-control; or at least of command and the attempt to control. One could even question who is commanding and who is controlling – depending on the counterfactual, since this kind of policy requires capacities and information for monitoring, controlling, enforcing and eventually applying sanctions, if existing at all. And it is exactly the partial lack of such capacities and information which offers large negotiation power to industry.

At the same time, in the late 1980s and early 1990s, international negotiations developed and conventions and protocols on global problems such as the Montreal Protocol on the depletion

of the ozone layer and the United Nations Framework Convention on Climate Change (UNFCCC) were adopted. Given learning processes within companies and increasing international pressure, different industries per se became more interested in shaping policy instruments regarding the environment also in order to establish comparative advantages. Presumably organisations like the World Business Council on Sustainable Development (WBCSD) facilitated, if not accelerated, such a learning process. Environmental catastrophes and mismanagement and/or insufficient communication related to such disasters contributed to this process. On the national level, organisations of progressive companies were founded – BAUM, future and Unternehmensgrün being the most important in Germany.

Coming back again to the national agenda, allowing for the application of market-based instruments appears to endanger industry's power since it would be the market forces that push industry towards a certain behaviour and investment. And – as entrepreneurs know very well – you cannot run counter market forces for a longer time. These forces are too strong. Industry's negotiation power would have gone. In Germany, there was not only the demand for market-based instruments, but at the same time a proposal for implementing a waste heat ordinance was put forward in the early 1990s, an element of a strengthened command-and-control policy, though intending to ask for implementing only profitable energy saving measures. This aimed at unveiling all energy saving potentials in industry by gathering and making available a bulk of information, so far only in industry's hands.

Furthermore the international public was looking more closely at Germany as the first Conference of the Parties (COP 1) of the United Nations Framework Convention on Climate Change (UNFCCC) was to take place in Berlin in 1995. Apart from the German government setting ambitious national targets (-25% CO₂- reduction by 2005 against 1990-levels) expectations were high that German industry should contribute to greenhouse gas emissions reductions. Against this multiple challenge industry moved a step out of the pressure of expectations and potential instruments by launching a self-commitment in March 1995 (BDI, 1995a) which was updated in 1996 though without substantial improvements (BDI, 1996). It was prepared in a joint effort of industry and bureaucracy (Ministry for Environment and Ministry for Economic Affairs) – basically to avoid the other instruments discussed.

Here it becomes evident that these environmental agreements were not at all voluntary, but only a somewhat forced reaction on the pressure emerging through the discussion of alternative instruments (Fischedick et al., 1995 and Rennings, 1996). Hence, the term voluntary is not used here – besides in line with the official terminology of the European Commission (1997 and 1996) and the European Environment Agency (1997).

After the change of the German government in 1998 – by the way, the first time ever in Germany that the population voted directly for a change; before the government changed during a legislative period –, the ETR was implemented in Germany from April 1999 on, and industry had apparently lost the battle against this market-based instrument as such. Still, industry had tremendous impact on the design of the ETR as described in more detail below.

Finally, an even more market-based instrument was emerging on the EU horizon: emissions trading. Emissions trading is a theoretical environmental concept developed decades ago, though basically applied in the USA. EU Member States hardly have experience with that. Ironically, it was the USA that insisted on emissions trading during the negotiation of the Kyoto Protocol which they now refuse to ratify themselves. German industry in particular succeeded in delaying and fighting against emissions trading for general reasons and a lot of misperceptions. It almost succeeded, strangely enough at least, to isolate Germany in the EU,

the country often perceived as frontrunner. Thanks also to the support of some big global players like BP and Shell who had experienced the enormous economic and environmental advantages of emissions trading due to the implementation of these instruments within their own company, the German position became eventually positive, though never enthusiastic (BMU and BMWI, 2002).

However, in the end the EU emissions trading directive was adopted (on EU level) and the national implementation plans were due by the 31st of March 2004 (BMU, 2004a,b). In fact, Germany, as one of the very few Member States of the EU, succeeded to deliver its National Allocation Plan (NAP) just in time on that day. But the price was high from an environmental point of view. Whereas the Environment Minister proposed to take the above mentioned environmental agreement on climate change (together with a subsequent agreement on the increase of cogeneration) and the therein mentioned overall target respectively commitment of emission reductions as base line for the emissions trading allocation, industry opposed strongly. Industry fought heavily against this objectively fair approach, although it did not ask for more than industry itself had promised to reduce voluntarily anyway. In the end, industry succeeded in almost escaping any reduction commitment in the first budget period (2005-2007). The thesis of many economists that these environmental agreements would not comprise any additional measure compared with the business as usual was more than confirmed. In fact, apparently they even had less substance given the fact that their target was not accepted as basis for emissions trading (BUND, 2004).

The initial claim for an increased use of market-based instruments by industry apparently was just a means to delay or avoid additional regulation (in the meaning of policy) – independent of the kind of instrument. Strangely enough, the bargaining for the allocation of emission credits and the final targets set for industry demonstrated impressively that even within such an instrument there can be strong negotiation power. In fact, in such a way, even market-based instruments can get very close to command-and-control policy, including an inefficient allocation. However, this is the case for the first allocation/target setting, but less likely for the operational phase of emissions trading.

But what role did policy advice play? The thesis here is that for the implementation of an ETR most aspects had been well examined beforehand – minor exceptions are presented in the chapter on the design and implementation of an ETR in Germany. Thus particular policy advice was hardly needed. For the emissions trading such advice was not available in the Ministry. Given a very tough time schedule, it was necessary to get policy advice in every day's processes. To that end, several researchers were asked to work as closely with the Ministry partly even in house, as possible to allow for immediate comments on any emerging aspects.

Concluding on these policy approaches and instrumental developments and the varying claims for instruments, industry's position could be considered as "instrument hopping" or it is like "zapping from one instrument to another" – always ahead of implementation. It became fairly clear that from an industry point of view, voluntary agreements are the preferred way to go. The attempts of combining a cap and trade approach with environmental agreements, has been widely seen as unnecessary state intervention, although the idea clearly is to reduce emissions in an economically efficient manner and to provide a secure framework for potential investments. Claims for market-based instruments appear to serve the purpose of delaying and avoiding any action. And by not accepting the initial targets for emissions trading on the basis of the environmental agreement industry succeeded in ruining the

credibility of the instrument of environmental agreements – ironically the one once favoured so much by itself.

E. HISTORY OF ETR

The conclusions of the previous chapter also apply to the ETR. For more than 20 years protagonists discussed ETR, publications were made much more than on any other instrument (except for command-and-control). Actually, it was back in 1983 that the Swiss economist Hans-Christoph Binswanger, together with Hans Nutzinger and Heinz Frisch (Binswanger et al., 1983), had invented the ETR. This idea was picked up by others, such as the leader of the Institute for European Environmental Policy (IEEP), Ernst von Weizsäcker. Environmental organisations like the German section of Friends of the Earth or BUND, worked on it more in depth. Parties started to getting interested. However, the first larger round of public debate was triggered in 1988 by an unconventional proposal laid down in a study by the Heidelberg based Environment and Prognosis Institute (UPI, 1988): All conventional taxes should be replaced by different kinds of environmental taxes. Given the increasing debate, the Federal Association of German Industry (Bundesverband der Deutschen Industrie – BDI) had also commissioned a study to explore the value of an ETR. Very likely against its expectations, the study by the Institute for Fiscal Research Studies at the University of Cologne found that it made indeed sense. At least BDI was fair enough to allow for the publication of the study (BDI, 1995b). Though the issue was picked up by Environmental Parties and Social Democrats the unification of the two German states made environmental issues drop down the political agenda – including the issue of ETR. This study reminded one of the study that BDI had asked from the economist Werner Meißner at Frankfurt University back in 1978 (Meißner and Hödl, 1978). He should examine the overall job impacts of advanced environmental policies. Industry was likely considering environmental protection as a job killer, searching for arguments to underline its thesis. But in fact he found that the balance is positive. This demonstrates the importance of independent policy advice. Other stakeholders were, of course, very interested in these results.

A second round of public debate was initiated by a study of the German Institute for Economic Research (DIW, 1994), commissioned by Greenpeace and published in 1994. For the very first time it simulated an ETR in Germany and its overall impacts on growth, employment and energy consumption. Its findings confirmed the so-called double dividend thesis as up to 800,000 additional jobs were predicted until 2005, while CO₂-emissions would drop by 14%. Now, policy started to get very excited about ETR. Practically all parties were somewhat in favour of it (Schlegelmilch, 1995). In February 1995, the Leader of the conservative group in the Parliament, Wolfgang Schäuble, asked his deputy, Hans-Peter Repnik, to develop a concept for an ETR, even if Germany had to go this path alone. All at a sudden, the Greens felt “their” issue and idea would be occupied by the conservatives and a competing race between the parties started following the line “who is first to present a concept for an ETR which could be implemented in Germany”. And, in fact, the conservatives soon had an internal paper drafted, to which one could have subscribed. But finally, it was the Greens and the Social Democrats winning this race. But the internal paper of the conservatives from May 1995 (CDU, 1995) was watered down within the party, mainly by the agricultural lobby and Bavaria. The outcoming official paper of the conservatives in November 1995 comprised no longer ambitious energy tax proposals as yet in the internal

paper to which one could have subscribed. But it contained lots of subsidies for environmentally-friendly behaviour and investments. Where the money should come from to finance that remained unsolved. By the end of 1995, it was found out later (Krebs and Reiche, 1997), a meeting between Chancellor Helmut Kohl, Jürgen F. Strube, the Chief Executive Officer of BASF, the large chemical company (in which Helmut Kohl once made his training as student), and the President of the Federal Association of German Industry, Hans-Olaf Henkel, had taken place in which Helmut Kohl promised that as long as he would be Chancellor no ecotax would be introduced. With that turning point, the protagonist of an ETR, Wolfgang Schäuble had to withdraw from his idea which he in fact did publicly at the end of 1995. As a consequence the debate was bogged down in the policy arena afterwards again.

This discussion and development was certainly also negatively influenced by the fact that the DIW study from 1994 had not calculated any exemptions for business. Hence a few energy-intensive sectors would have been hit quite strongly. This was likely the moment when industry started to fight ETR more offensively and changed its more or less neutral or vaguely positive attitude. This is somewhat hard to understand given that the majority of industry would be winning.

On the evening of the 8th of November 1994, Green Budget Germany (GBG – Förderverein Ökologische Steuerreform – FÖS) was founded by ETR protagonists. The intention was to bridge the way for industry to agree to an ETR since the DIW study had apparently impacted the opposite. Ever since it is a small, but partly influential association with good political contacts and the scientific capacity to analyse features appropriately. GBG, however, did not succeed in getting industry agree to ETR, but at least clarified that it all depends on a good design and that it is not a question per se as to whether to condemn an ETR or as to whether to praise an ETR.

Another study by the Rhine-Westphalian Institute for Economic Research in 1996 (RWI, 1996) created confusion. In an unusual way it had presented preliminary findings in a press conference. It should demonstrate that overall there would be substantial job losses in the energy-intensive industry, particularly in North- Rhine-Westphalia. Numbers were mentioned which seemed to show that. But the reaction from the then Minister President (now Federal Minister of Economic Affairs) Wolfgang Clement was such that a government would never design an ETR in such a way that there would be such substantial job losses. Apparently, the design was considered crucial, while the idea as such was still attractive (Luhmann, 1996). When looking closer at the short version of the RWI study published quite some time afterwards, one was struck by the results. In a table one could find the negative job balance (-400,000) – and in the text one could find statements like: “There are also positive job impacts in other sectors” and “the overall impact is not necessarily positive”. However, the positive impacts have not been quantified and put in the same table as the losses. Tricky idea one could argue. The impression that remains in the public is that the overall impact is negative. But serious science and helpful policy advice looks different. Furthermore, the announced comprehensive study has never been published – at least not until mid 2004. The suspicion is that this was an attempt to bring down enthusiasm for an ETR – and it succeeded, at least for some time.

In the run up to the elections in 1998, the German Association of Natural Protection (Deutscher Naturschutzring – DNR) started a campaign, funded by the Heinrich-Böll-Foundation, closely linked to the Green Party, in which it promoted an ETR and gathered

support from 80 scientists, 200 companies, trade unions and many more (DNR, 2004). A general book on ETR was also published for this campaign (Krebs et al., 1998). Generally, one could look back at a broad coalition of stakeholders in favour of ETR. This is important to remember when considering the further development and acceptance. In March 1998, the Green Party had (again – as several times before) adopted its position to increase transport fuel taxes up to 5 DM, about 2.56 € per litre until 2010. This claim had been put forward initially by the Council on Environmental Advisers several years before. However, this scientifically sound and justified demand was considered as a big threat by the public since the time span until 2010 was more or less neglected, potentials for structural changes and a large fleet of low-consuming cars were not taken into account. The public debate almost made the Greens stumble.

Another danger emerged from the Federal Association of German Industry (BDI) in summer 1998. One of its committees planned to launch a brochure on the job losses if an ETR was to be implemented. Likely BDI intended to publish this in a large number of issues in many companies and disseminate it to their employees. Somewhat by chance, this campaign fortunately never took off the ground. In a drafting stage, protagonists of an ETR received an informal hint. The draft leaflet was full of unproven statements and potential horror scenarios – all based only on the thesis that an ETR would in any case imply tremendous reallocations and thus job losses. However, several countries had already introduced an ETR successfully whilst improving their employment situation (Schlegelmilch, 1999). The only way to prevent a similar debate as in spring 1998, but now just before the elections was to make BDI's supposed intention public and to show that these statements were superfluous and based on wrong assumptions. Otherwise one could well imagine that the debate would have been timed just before the elections triggering an irrational debate influencing the public opinion in a way that facts could hardly have time to reach people's attention. Hence, the author decided to go ahead and unveil this plan (Schlegelmilch, 1998) – still risking to be on the black list of BDI ever since.

However, they did not only survive this difficult period, but the Greens and Social Democrats then even formed the first red-green government in Germany. In fact, in terms of numbers another constellation would have been feasible, too. The Social Democrats could have chosen – as before in the 1970s until 1982 – the Liberal Democrats as partners. Besides, the Liberals in Germany are – unlike their partners in the United Kingdom – much less environmentally progressive. But, maybe because Oskar Lafontaine as party leader had substantial influence at that time, the Greens, his preference, were chosen. In addition, there were similar constellations in the important Land North-Rhine-Westphalia. Equivalent structures on the federal level would make politics easier. This was likely the crucial decision which helped the ETR to come on the agenda for implementation.

F. DESIGN AND IMPLEMENTATION OF THE ETR IN GERMANY

Major parts of the design, the implementation and the environmental impacts are well described and laid down in detail in a paper from the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU, 2004c). Hence, it is generally referred to and only very briefly summarised here. In a nutshell, energy taxes were introduced or increased in overall five small steps, announced ahead. The revenue was used to lower social security contributions to the pensions fund, a minor part of more than 10% were used to

favour environmental fuels, techniques and behaviour. Overall about 2% of total taxes and levies were shifted from labour towards energy/resource use in an almost revenue neutral way. In the following, aspects of policy advice are at the core of debate, and in the next chapter, the focus is on environmental impacts and experiences with public reactions. When the government and others reflected on how to best implement the ETR, it turned out that basically three issues had not yet been solved from the policy advisor side:

- How to exempt electricity from renewables from the electricity tax?
- How to treat and possibly differentiate business?
- How to take social aspects better into account?

10

Here, although Germany has had a debate of about 15 years and several dozens of studies, at least one dozen being of some practical use, good advice that could now be implemented as the window of opportunity had come, was missing. Since the implementation in 1999, at least better ideas have been developed on how to answer those questions, though only partly been implemented. Even though researchers and policy advisors were closely involved in the design phase of the ETR no real valuable idea for answering these questions was put forward that could have been implemented. Overall three hearings took place in the Finance Committee of the German Bundestag to receive advice from all kinds of stakeholders. In several parts, also a kind of brain drain was visible where protagonists of an ETR now came into positions in the government or parliament which allowed for directly influencing the process and decision making.

G. EXPERIENCES WITH THE ETR IN GERMANY

As mentioned in the last chapter, experiences are described and laid down in detail in a paper from the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU, 2004c). In the following, some particular aspects are selected and discussed, clearly more informal than it could be done in an official paper. The experiences were very ambivalent. The idea of an ETR was not well understood, particularly the fact that revenues were put into the pensions fund and were not used for environmental purposes. Many did not even realise that their social security contributions to this pensions fund had been reduced. Furthermore, the acceptance was only moderate since people did not like paying higher energy taxes while the world oil price increase was pushing gasoline prices up at the same time. Some even argued that spending more money on the pensions fund would delay any serious reforms in Germany's pension system. In fact, it turned out later that this had been a major motivation for some influential political leaders.

There were always two schools of how to use the revenues: One argued one should not increase total influence of the state and thus reduce other more distorting taxes and levies. This was dominant in the 1990s and also adopted by the broad majority of protagonists, and clearly also from environmental NGOs where this position would not seem self-evident. Others argued that one should use the money for financing structural changes in transport, energy, agriculture and other sectors. This would imply an increase of the state quota, but ensure an acceleration of the structural change and hence the target would likely be reached earlier. The former school eventually succeeded, but for acceptance reasons, the extent to

which the latter school gained influence increased over time. The latter found its way to implementation by an increased spending for modernising the buildings stock from 2003 on.

In fact, it turned out that the political agreement to spend major parts for reducing labour costs was absolutely essential for the ETR to survive the major public debate in 2000. Had there been no planning and announcement to use the revenues for lowering the pensions fund contribution and had the lowering of the high unemployment in Germany not been the absolute top priority, the ETR would have been stopped very likely by Chancellor Schröder in autumn 2000. He would not have continued the ETR making his government unpopular if the revenues were basically spent for some prestigious environmental projects. Only a strong fiscal driver can ensure the political survival of an ETR in critical situations.

In autumn 2000, when the world oil prices had quadrupled within the last 18 months, some tabloids blamed the increase of about 60 pfennigs (or around 0.30 €) on the ecotax, although only one quarter, 12 pfennigs (0.06 €) could seriously be attributed to the ecotax. The other part was due to the increasing world oil price and exchange rate of the US-dollar. Even worse, major parts of the opposition, and even protagonists of an ETR from the conservatives in the mid-1990s, including the former Environment Minister and now party leader of the conservative party, Angela Merkel, used the political situation to blame high fuel prices on the government as well. This situation did not make it easier for the government to communicate the facts and apparently given this debate the public is still influenced and there is no broad acceptance, but this varies around 30-50%. Somewhat encouraging is the general acceptance for lowering taxes for those who burden the environment less as polls show.

It was a bit schizophrenic that on the one hand the government offered a market-based instrument where the decision where, when, how and whether to save energy was left up to every individual's decision to allow for maximum flexibility and freedom and thus a very cost-efficient approach – as often claimed. But on the other hand, people always and still do claim that the “good” government would certainly know best how to spend the money for the environment and thus it should also do accordingly, but not use it for something else like the pensions fund, implying a higher state influence, opposed in general. People expected environmental impacts to stem from the use of the revenues, whereas the government expected environmental impacts to stem from the tax incentive itself.

Reality finally confirmed the government's point of view. The environmental impacts became clearly visible – although hardly any money was used for environmental purposes. According to figures from the Federal Statistical Office, fuel consumption in road traffic (in each case, figures are based on amounts of mineral oil taxed in Germany) has been decreasing continually, with decreases of 2.8% in 2000, 1.0% in 2001, 2.3% in 2002 and 3.5% in 2003. The biggest contribution to this development was petrol sales, which fell by 4.5% in 2000, by 3.0% in 2001, by 3.3% in 2002 and by an additional 4.3% in 2003. In 2000, 2002 and 2003, sales of diesel fuel decreased by 0.7, 1.2 and 1.6%, respectively. A slight increase was registered for diesel fuel in 2001, although this increase, at 1.4%, was much smaller than that seen in 1999 (+4.7%). The reasons given for this decrease include efficient, more reserved driving habits and overall mileage reductions, due to the higher petrol prices, and the lower specific mileage fuel consumption of new vehicles.

Goods transports on roads have also decreased in the past few years. The Federal Statistical Office reports that tonnage in road transport of goods decreased by 2.9% in 2001, 4.3% in 2002 and 1.5% in 2003. Decreases in railway goods transport levels, at 1.6% in 2001 and 1.1% in 2002, were smaller than in the road transport sector. In 2003, railway goods

transports actually increased by 4%. Transport companies are responding to the increased adaptation pressures by using their vehicles more and more efficiently. Pursuant to the Federal Office for Goods Transports, total no-load mileage of German trucks, as a percentage of total mileage, has continued to decrease, while the percentage share of with-load kilometres has increased further – in 2000, somewhat more strongly than in the years before: With-load kilometres as a percentage share of total kilometres increased from 71.4% in 1995 to 73.4% in 1998, to 74.1% in 1999 and to 75.3% in 2000.

In addition, in recent years the numbers of passengers travelling by public transport have begun increasing again. Following a downward trend in the numbers of passengers using local public transport up to 1998, these numbers again registered constant increases over five consecutive years. According to the Federal Statistical Office, the numbers of people using local public transportation have grown continuously since 1999: +0.4% in 1999; +0.8% in 2000; +0.8% in 2001; +0.5% in 2002 and +1.5% in 2003.

According to CarSharing, a nation-wide umbrella association of car-sharing providers, the numbers of people who are members of car-sharing agencies and who use their services increased by 26% in 2000, by 22% in 2001, by 8% in 2002 and by 15% in 2003 (in each case, the increases are with regard to the previous year).

The climate, the environment, the job market and innovative enterprises all benefit from the ecological tax reform, as the reform makes it possible to reduce automobile traffic, with its high external costs; replaces automobile transports with more environmentally sound modes of transport; and reduces energy consumption and the related environmental pollution by promoting use of alternative fuels. These positive trends need to be reinforced via a reliable framework; a reliable planning framework is one of the keys to energy-saving investments, which can take a number of years to pay off.

The Environmental Protection Agency has just released a report on the empirical impacts of the ETR. It finds that, in reality, the impacts of the ETR are often much better and brought about more benefits than generally perceived. It particularly demonstrates several concrete companies, large and small ones, which clearly benefited from the ETR (Umweltbundesamt 2004).

Strictly scientifically, not all of those phenomena can be attributed fully to the ETR, and some is certainly also due to the high oil price. However, given people's perception that most of the fuel price increases is due to ETR (though e.g. in 2000 only a quarter was attributable to that), it could be justified to argue that the environmental dividend as just described could also be claimed by the ETR protagonists. And perceptions are facts and can have strong influences which justifies a rather cheeky approach. Nevertheless the message is very clear: Prices matter – and this has to be enlarged to “Prices and perception/awareness matter”. This is all that market-based approaches have to prove, either triggered by higher demand as seen in 2004 or by ecotaxes as implemented in Germany and other countries.

The positive impacts of the ETR in Germany were also confirmed by a study in 2001 by four institutes, led by DIW (Bach et al., 2002). For the transport sector it said that CO₂-emissions would be reduced by 3.84% until 2010 against 1998. Here policy advice helped to get more rationality in the public debate, though this was basically a study for interested stakeholders. However, the government used the findings to underline the appropriateness of the ETR.

H. CONCLUSIONS

The major conclusions that can be drawn are:

1. Different waves of public debate on ETR led to an ever increasing chance for implementation.
2. However, industry successfully delayed implementation of effective market-based instruments by instrument hopping and by changing policy approaches just as appropriate to that end.
3. The likely rationale behind this is that once such market-based instruments such as ETR are implemented in a more or less text book form, industry would be dependant almost completely to market forces. Though often claimed to be good, this should, of course, rather never apply to one's own company as one knows the radical effectiveness of market-based instruments. Hence, negotiations on the design of an ETR and e.g. emissions trading became very important.
4. A fiscal driver appears to be crucial for the survival of an ETR in crisis situations, environmental arguments alone will not be sufficient. Fiscal and environmental stakeholders should become more aware of their joint interests and thus "natural" alliance to exploit their full potential for the sake of the environment and the budget.
5. The usefulness of policy advice depends heavily on the phase of the political process, the stakeholders and the way it is provided.
6. It is not easy to generalise the process and explore the lessons learned in order to help other countries which are also working on the implementation of economic policy instruments. Every country has a very special set of actors including the influence of certain people as it is explained for the German case in this paper. It is, however, important to really bring together different actors from the political parties, the bureaucracies, scientific institutions, industries and environmental NGOs with their counterparts in other countries to allow for creating a good network and for ensuring that the same "language" is spoken by the stakeholders. Such a transfer e.g. was agreed between the Czech Ministry for the Environment and the German Ministry for the Environment back in 2002. This successful approach is about to be enlarged to other countries such as Poland in 2004.

I. REFERENCES

Bach, S., et al. (2002), The Effects of Environmental Fiscal Reform in Germany: A Simulation Study, *Energy Policy* 30, 803–811.

BDI (1996), *Updated and Extended Declaration by German Industry and Trade on Global Warming Prevention*, Cologne.

BDI (1995a), *Declaration by German Industry and Trade on Global Warming Prevention*, Cologne.

BDI (1995b), *Beurteilung ökologischer Steuerreformvorschläge vor dem Hintergrund des bestehenden Steuersystems*, Berlin.

Binswanger, H.C., H. Nutzinger, H. Frisch, et al. (1983), *Arbeit ohne Umweltzerstörung*, Frankfurt/Main.

BMI (Bundesministerium des Innern) (Ed.) (1974), *Umweltgutachten 1974 des Rates von Sachverständigen für Umweltfragen*, Bundestags-Drucksache 7/2802, Bonn, XI f.

BMU (Federal Ministry for the Environment, Nature Conservation and Nuclear Safety) (2004a), German cabinet agrees on basis for the start of emissions trading, press release, No. 087/04, Berlin, see: <http://www.bmu.de/en/800/js/news/pressrelease040331/>, accessed 30.08.2004.

14 BMU (Federal Ministry for the Environment, Nature Conservation and Nuclear Safety) (2004b), Nationaler Allokationsplan für die Bundesrepublik Deutschland 2005-2007, Berlin, see: http://www.bmu.de/files/nap_kabinettsbeschluss.pdf.

BMU (Federal Ministry for the Environment, Nature Conservation and Nuclear Safety) (2004c), The ecological tax reform: introduction, continuation and development into an ecological fiscal reform, http://www.bmu.de/files/oekost_en.pdf, accessed 30.08.2004.

BMU (Federal Ministry for the Environment, Nature Conservation and Nuclear Safety) and BMWA (Federal Ministry of Economics and Labour) (2002), Federal Government Reaches Breakthrough in Emissions Trading, joint press release, No. 291/02, Berlin, <http://www.bmu.de/en/800/js/news/pressrelease021204/>.

BUND (2004), BUND-Analyse des nationalen Zuteilungsplans für den europäischen Emissionshandel (Kabinettsbeschluss vom 31. März 2004, BUND-Analysis of the national allocation plan of 31st March 2004), Berlin.

CDU-/CSU-Fraktion (1995), "Konzept 2000", Entwurf, 03/05/1995.

Coase, R.H. (1960), The Problem of Social Cost, *Journal of Law and Economics* 3.

DNR (Deutscher Naturschutzring) (2004), <http://www.foes-ev.de/4fakten/index.html>, here 2. Deutschland and „Klare Befürworter der Ökologischen Steuerreform, Aufruf von BUND und DNR von 1998“, accessed 30/08/2004.

DIW (Deutsches Institut für Wirtschaftsforschung) (1994), *Ökosteuer – Königsweg oder Sackgasse*, Berlin.

European Commission (1997), *Communication on Environmental Agreements*, Brussels.

European Commission (1996), *Communication on the Use of Environmental Agreements as an Instrument for the Implementation of Environmental Policy in the Community*, COM(96) 561, Final Report, Brussels.

European Environment Agency (1997), *Environmental Agreements*, Copenhagen.

Fischedick, M. et.al (1995), „*Erklärung der deutschen Wirtschaft zur Klimavorsorge*“: *Königsweg oder Mogelpackung?*, Wuppertal Papers No 39, Wuppertal.

Görres, A., H. Ehringhaus, and E.U. v. Weizsäcker (1994), The Way Towards an Ecological Tax Reform – Less Pollution and More Employment, in: *The Memorandum of Green Budget Germany – GBG*, Munich, see: <http://www.foes-ev.de>.

Krebs, C., D.T. Reiche, and M. Rocholl (1998), *Die Ökologische Steuerreform. Was sie ist, wie sie funktioniert, was sie uns bringt*, edited by Deutscher Naturschutzring (DNR), Natur-

schutzbund (NABU), and Bund für Umwelt und Naturschutz Deutschland (BUND), Berlin, Basel, Boston.

Krebs, C. and D.T. Reiche (1997), Wie die Ökologische Steuerreform beerdigt wurde, *Blätter für deutsche und internationale Politik* 7/97 (documented in: Frankfurter Rundschau on 27/08/1997).

Luhmann, J. (1996), RWI Presents Contradicting Study to DIW/Greenpeace, *Wuppertal Bulletin zur Ökologischen Steuerreform* 3, 12f.

Lühr, H.-P. (1989), Die Abwasserabgabe – Grundlagen und Auswirkungen, *WSIMitteilungen* 8, 432-438.

Meißner, W. and E. Hödl (1978), *Auswirkungen der Umweltpolitik auf den Arbeitsmarkt*, Bonn.

Memorandum junger Abgeordneter des Deutschen Bundestages zur Klimakonferenz in Berlin, Juni 1995.

Rennings, K. (1996), *Negotiated Agreements in Environmental Protection: No Free-Market Instrument*, Centre for European Economics Research (ZEW), Mannheim.

RWI (Rheinisch-Westfälisches Institut für Wirtschaftsforschung) (1996), *Regionalwirtschaftliche Wirkung von Steuern und Abgaben auf den Verbrauch von Energie – Das Beispiel NRW*, Essen.

Schlegelmilch, K. (Ed.) (1999), *Green Budget Reform in Europe. Countries at the Forefront*, Heidelberg.

Schlegelmilch, K. (1998), Auf zum letzten Gefecht. Wie der BDI mit einer unsachlichen Kampagne gegen Ökosteuern in den Wahlkampf eingreifen will, *Die ZEIT*, 02/07/1998, 25.

Schlegelmilch, K., (1995), Parteien im Wettstreit. Welche Partei hat die beste Ökologische Steuerreform (ÖSR)?, *ÖkologiePolitik* 70, 9f.

Umweltbundesamt (2004), Quantifizierung der Effekte der Ökologischen Steuerreform auf Umwelt, Beschäftigung und Innovation, <http://www.umweltbundesamt.de/uba-infopresse/hintergrund/index.htm>, Berlin.

UPI (Umwelt- und Prognose Institut) (1988), *Ökosteuern als marktwirtschaftliches Instrument – Vorschläge für eine ökologische Steuerreform*, UPI-Report No. 9, Heidelberg.