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European Policy on State Aid to the Coal Industry

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European Policy on State Aid to the Coal Industry

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Abstract

In this article we take a closer look at the argumentation behind subsidies to the European coal industry, the actual EU regulations and strategies on the subject, and the effects on both Western and Eastern European coal producers. We find that the European coal production is far from competitive. The total coal production in the EU as well as the total absolute amount of subsidies given to the indigenous coal producers, has declined dramatically over the past ten years. There has been a shift in types of aid given, from operating support to support for reduction of activity and the implementation of environmentally friendly technology. The argumentation behind the subsidising of the European coal industry has also shifted, from employment and regional autonomy arguments to the argument of energy supply security outlined in the European Commission's Green Paper on Security of Energy Supply. The strategy outlined in this Green Paper stands in sharp contrast to the goal of the European Steel and Coal Community, namely to eliminate the subsidies to the European coal industry by the end of 2010.

1 Introduction

Liberalisation of the European coal and electricity markets combined with a continuing decrease in international coal prices, has lead to sharpened competition and a demand for cutting down on coal producer subsidies in Europe. On the other hand, exactly the same conditions have lead to an increased need of financial aid to help mitigate the social and economic consequences for the relatively unproductive European coal industry.

The international coal market of today is a relatively well functioning and liberalised market with few obstacles to free competition. According to the International Energy Agency, world coal trade increased by 7.7% in 2001, compared to increases of 10.0 percent in 2000 and 0.4 percent in 1999. In the ten-year period from 1992 to 2002, the world total hard coal trade increased from 403.2 million tonnes (Mt) to 622.9 Mt, a total increase of 54.5%. The amount of coal traded in international markets is small in comparison with total world consumption however. In 2001, world imports of coal amounted to 650 million tons, representing only 12% of total consumption. By 2025, coal imports are projected to rise to 826 million tons, accounting for an 11% share of world coal consumption [2].

Coal production in the EU has declined dramatically over the past ten years [2]. Compared to 1992, the year before the current policy framework came into force, hard coal production in the EU has fallen by well over half, from nearly 185 Mt to 70 Mt in 2002. France has experienced the biggest proportional contraction, with production down by more than 85% to 1.9 Mt. The UK has seen the largest absolute decline, by over 51 Mt or some 60%. Germany has reduced production by 44 Mt or about 60%, and Spain by more than 5 Mt or about 28%.

A number of coal producing countries give various forms of financial support; in 2001, the total sum of direct subsidies authorised by the European Commission amounted to 6292.9 million Euros [7]. Germany had by far the largest absolute amount of subsidies with 4165.7 million Euros, while the UK producers in comparison only received 81.3 million Euros. In most cases, the grounds for support are based on a pragmatic concern to maintain employment and regional economic

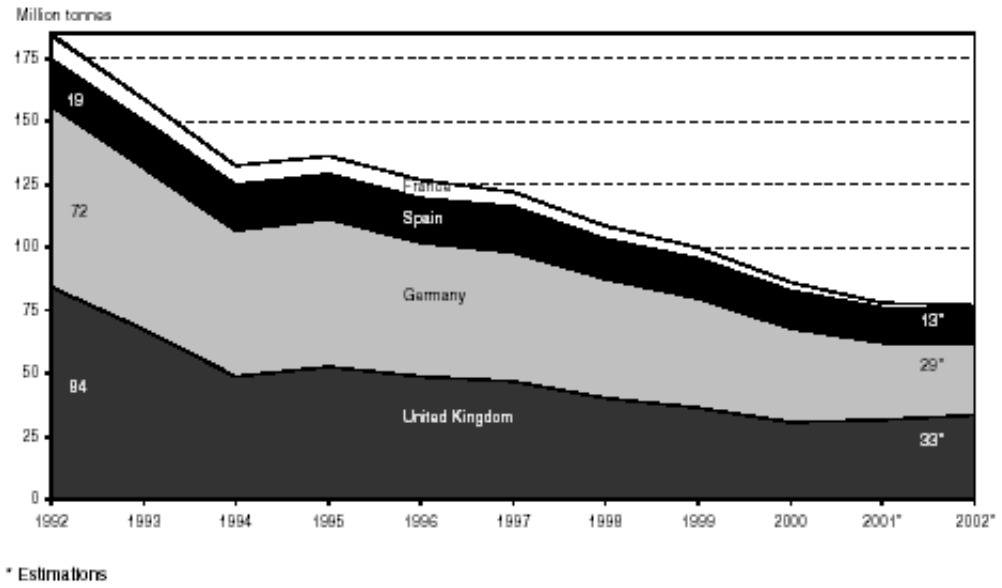

Figure 1: EU hard coal production 1992-2002.
Source: Coal Information 2003 [2]

activity. Security of energy supply and support for industrial development based on coal-mining technology are emerging as more sophisticated justifications for support.

The State aid schemes based on the objectives of the European Coal and Steel Community (ECSC) Treaty, have played a very important role in managing the structural changes which have characterised the development of the EU coal industry. In the following I will look closer into the argumentation behind subsidies, the actual EU regulations on the subject, and the effects on both Western and Eastern European coal producers.

2 A Shift in Subsidy Argumentation

The typical arguments in favour of financial aid or subsidies to the European coal industry can be roughly divided into two main categories: 1) employment and 2) energy security.

Employment The consequences of shutting down mines with high production costs, may be severe to local communities that are based on coal mining. In the four main EU coal producing states[1] alone there has been a loss of about 105,000 underground jobs as a result of the shutting down of mines [4]. A high unemployment rate with all its possible negative consequences, is normally not a very welcome phenomenon neither to the affected local communities, nor to the politicians that are constantly trying to collect votes.

The validity of this standard argument is, however, quite firmly rejected in the case of Western Europe by, among others, Marian Radetzki [12]. He points out that employment in coal production does not form a significant size in the European context. Although shutting down mines would lead to thousands of unemployed, it would, according to Radetzki, not lead to a significant change in the unemployment rates. To the macro economic situation of the country, the decline in coal related jobs is maybe not so severe, but to some communities especially effected and to politicians dependent on being reelected, the situation may still be apprehended as a crisis. Another, perhaps more valid, argument in this discussion is that of the IEA [1] which argues that there should be more efficient ways, especially in a long-term perspective, to employ people, than by protecting unproductive industry without a future.

The United Kingdom and Germany dominate Western European coal output. They also dominate the region‘s coal employment, and would incur the largest absolute employment losses in consequence of subsidy elimination. However, the recent history of the two countries‘ hard coal history has developed along very different tracks. Whereas the UK since the 1980s has experienced a continuing rise in labour productivity combined with a reduction in coal output, the labour productivity in Germany has more or less stagnated while the output is decreasing. In the early 1990s, the prospect of subsidy elimination therefore posed a somewhat limited employment problem to the UK compared to Germany.

Energy Security Domestic coal production is seen as a measure to increase the degree of energy self sufficiency. Self sufficiency is thought of as an important

[1] Germany, United Kingdom, Spain and France

factor in protecting the citizens against harmful disturbances, in terms of price hikes or physical interruptions of international energy supply.

Again Marian Radetzki [12] rejects the validity of this argument for subsidised coal production in the European Union. He claims that for most countries there exist other forms of energy than coal based energy, and that following the growing commitment to other energy sources, the energy import dependence of Europe has experienced a dramatic fall over the last couple of decades. Germany is the only country in question for which this conclusion is not valid, as the European giant has actually experienced a rise in energy import dependence in the same period. It is, however, not clear that this makes the energy security more vulnerable. If the international market consists of a sufficient number of actors and suppliers, there is almost always an opportunity to switch supplier in the case of high prices or no supply. In the same way, a local energy market that is very concentrated, may well be a threat to the energy security as there are no or few other optional suppliers when prices are to high or the existing suppliers reduce their output. In sum, Radetzki concludes that the international coal market is not very risky as far as energy supply is concerned, the market is well developed and competitive, there is little concentration among the suppliers, there are few political risks in the main countries involved, the freight routes are safe from military actions and the supply curve is quite flat.

As can be seen from the citation below [1], this view seems to be supported by the International Energy Agency (IEA), in which all the EU coal producers are members.

The IEA does not consider there to be a realistic security of supply justification for financial assistance to indigenous producers to continue. Where member countries justify such aid on social and regional grounds, the IEA believes that there are other, more efficient, methods of targeting scarce financial resources to regions affected by the decline of the indigenous hard coal industry.

The European Commission, has, as we shall see in the next section, a different opinion on the question of energy security. All in all however, in spite of certain

disagreements on some of the justifications of subsidies, the Energy Information Association in the United States, the Council of the European Union and the International Energy Agency all argue principally against the typical forms of industry subsidising. Nevertheless, in the following section we shall see, that at the same time they do recognise the hard conditions the coal industry has had to live with the last decades and that they do, based on this fact, accept certain types of subsidies, especially those given as a means to reduce the negative effects in a period of transition into production without any subsidies at all.

3 The European Union Policy on Coal Subsidies

Even though the European Union normally promotes competition and fair trade, the internationally uncompetitive coal production in the EU has been given extensive support over the last fifty years. In Spain and Germany for example, average production costs are around three times the world market price, and there would be no basis of existence for the coal industry at all, had it not been for the different types of protection and support provided from the respective states. During the fifty years from 1951 to 2002, the total amount of aid to the coal industry has been gradually reduced. The trend has not appeared straight and pointed in the same direction for all these years, but the reduction of financial state aid has been especially evident in the 1990s when the total amount of subsidies was reduced from nearly 8,000 million Euros in 1994 to a little more than 6,000 million Euros in 2001, see table 1 and figure 2.

Aid Authorised 1994-2001

Million Euros

	1994	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**
Germany	5027.2	4890.9	5466.5	5330.2	4787.4	4700.5	4693.7	4156.7
Spain	954.6	1055.2	1028.3	1068.3	1159.3	1071.3	1121.1	1069.1
France	912.8	669.2	616.9	956.2	998.6	984.7	1010.2	991.4
UK	890.1	1622.8	512.8	512.3	1317.2	0.0	151.5	81.3
Total	7775.7	8233.9	7687.4	7867.0	8262.4	6756.4	6976.6	6292.9

Table 1: Source: Commission of the European Communities [7]

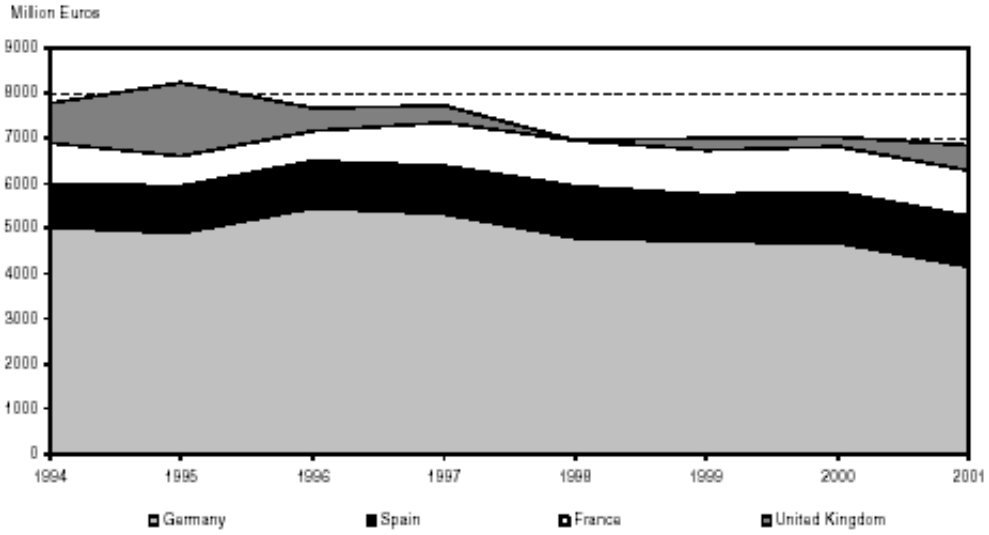

Figure 2: EU state aid approved for hard coal production.
Source: Coal Information 2003 [2]

From figure 3, it is also possible to recognise the shift in arguments behind the subsidies. The operation aid in 2001 amounted to about 2,300 million Euros, less than half of the same type of subsidies given only seven years earlier, while the support for inherited liabilities was strongly escalated over the period to nearly 3,000 million Euros in 2001. The aid for reduction of activity was strongly escalated in 1996 and reached a level of 2,500 million Euros by the end of that year. This subsidy group remained about the same for the rest of the decade, but we can see a slight reduction in the category in 2001 as more and more of the planned reductions in production were been completed. The development in aid to the coal industry seen in figure 3, is reflected in the EU policy outlined in the rest of this section.

Up to 23 July 2002 Coal subsidies in European Union countries have, the last 50 years, been governed by the articles of the European Coal and Steel Community (ECSC) Treaty. Signed in 1951, it entered into force the following year. It expired in July 2002 and was replaced by Council Regulation (EC) No 1407/2002 on State

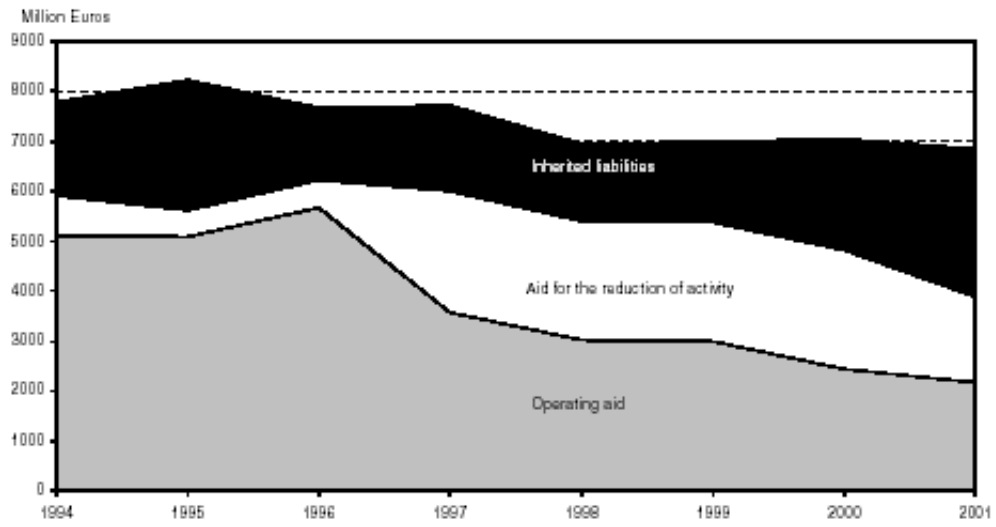

Figure 3: Purpose of EU state aid for hard coal production.
Source: Coal Information 2003 [2]

aid to the coal industry [11]. State aid was strictly prohibited under Article 4(c) of the ECSC Treaty. However, since 1965, given the severe problems in the industry, a series of temporary framework decisions enabled financial assistance to be given. These framework decisions have laid down the objectives under which aid may be considered, and required all countries to seek prior authorisation for aid measures from the European Commission on an annual basis.

Although this treaty now is no longer valid, it remains an important document as most of the current regulations build on the objectives and considerations that were collected in it. I will therefore present the main regulations for subsidising the coal industry from the not-so-outdated 1951 treaty.

All subsidies of the coal industry must be approved by the European Commission. European Commission Decision 3632/93/ECSC [10] established that the European Commission could only consider aid if it met at least one of the following objectives:

1. Aid to restructures towards economic viability

2. Aid to solve social and regional problems connected to reduction in the activity of the production units

3. Aid to help adjust to environmental protection standards

Aid was granted under the following conditions laid down in the decision:

1. Operating aid to cover the difference between production costs and the selling price freely agreed between the contracting parties in light of conditions prevailing on the world market (Article 3)

2. Aid for the reduction of activity (Article 4)

3. Aid to cover exceptional costs arising from inherited liabilities (Article 5)

4. Aid for research and development (Article 6)

5. Aid for environmental protection (Article 7)

From July 2002 The new Council Regulation on state aid to the coal industry was agreed upon and signed by the Energy Ministers of the European Union on July 23d 2002 [11]. In brief it was agreed to phase out subsidies to domestic coal producers by 2010 and stipulated that, beginning in 2003, subsidies would be reduced to below their 2001 levels. The member states agreed to review this decision in 2007. In the following I present some of the arguments and background for the policy agreed upon as well as an outline of the policy itself.

The proposed state aid scheme takes account of factors which characterise the present coal industry and the Community energy market as a whole. Such factors may, however, change to a lesser or greater extent and some of them unexpectedly, particularly the ability of Community coal to help strengthen the Union's energy security. To be able to form the "right" policy, the affected states agree that these factors should be reevaluated during the course of the scheme in the context of sustainable development by way of a report.

The European Community has become increasingly dependent on external supplies of primary energy sources[2] As stated in the Green Paper on a European

[2]This is a contradiction to the argument of Marian Radetzki referred to in section 2. Radetzki's article was written in 1995, however, and the world energy trade pattern has changed since then.

strategy for the security of energy supply adopted by the Commission on 29 November 2000, the diversification of energy sources, both by geographical area and in products, will make it possible to create the conditions for greater security of supply. In addition, the world political situation brings an entirely new dimension to the assessment of geopolitical risks and security risks in the energy sector. A minimum level of coal production together with stressing the development of renewable energy sources is considered important to maintain a proportion of indigenous primary energy sources and thereby boost the European energy security. On this background, the European Parliament adopted a Resolution on 16 October 2001 on the Commission Green Paper on a European Strategy for the Security of Energy Supply, which acknowledges the importance of coal as an indigenous source of energy. The European Parliament said that provision should be made for financial support of coal production, while simultaneously recognising the need for more efficiency in this sector and for cutting back subsidies. This statement is somewhat unclear and stands sharply in contrast to the ECSC goal of bringing all subsidies to the coal industry to an end by the year 2010. Although it seems likely that the green paper on energy will dominate the EU coal strategy in the near future, it is not clear which argument will win the final discussion of a consistent policy towards the coal industry.

There are, apart from the energy security aspect, especially two arguments in favour of supporting the EU coal industry:

1. Maintaining the support for areas affected by restructuring or closure of mines to alleviate the social and regional repercussions.

2. A minimum level of production of subsidised coal will help maintain the prominent position of European mining and clean coal technology, enabling it in particular to be transferred to the major coal producing areas outside the union. Such a policy is believed to contribute to a significant global reduction in pollutant and greenhouse gas emissions.

Recognised categories of aid:

1. Aid for the reduction of activity (Article 4): The operation of the production unit in question must be planned closed no later than by the end of 2007.

The aid must not distort the internal competition in the European market, or lead to lower delivered prices in the EU than in third countries.

2. Aid for accessing coal reserves (Article 5): Member states may grant aid to an undertaking, intended specifically to production units, only if the aid contributes to maintaining access to coal reserves.

3. Aid to cover exceptional costs (Article7): Costs that are not related to current production and resulting from the rationalisation and restructuring of the coal industry, may to a certain extent be covered by the Member States.

Some specifications or restrictions on receiving aid are stressed:

1. The production of coal must be limited to what is strictly necessary to make an effective contribution to the objective of energy supply.

2. State aid to help maintain access to coal reserves to ensure energy security should be earmarked for production units which could contribute to this objective at satisfactory economic conditions.

3. Aid shall cover only costs connected to coal for the production of electricity, the combined production of heat and electricity, the production of coke and the fuelling of blast furnaces in the steel industry, where such use takes place in the Community.

4. The overall amount of aid to the coal industry granted in accordance with Article 4 and Article 5 shall follow a downward trend so as to result in a significant reduction. No aid for the reduction of activity may be granted under article 4 beyond December 31 2007.

5. The overall amount of aid to the coal industry granted in accordance with articles 4 and 5 shall not exceed, for any year after 2003, the amount of aid authorised by the Commission in accordance with Articles 3 and 4 of Decision No 3632/93/ECSC for the year 2001.

To summarise: Subsidies are to a certain extent perceived as an important, if not the only, way to maintain a certain level of European coal production. Some financial support for the coal industry is legitimated by its ability to help boosting the European energy security. Another argument for keeping up a certain level of European coal production, is the possible positive external effects the clean production technology used in Europe may have on the world production technology and thereby the global emissions of greenhouse gases. The commission is however still concerned about the possible negative effects on the coal and energy markets as well as the greenhouse gas emissions that are unavoidably connected to coal based energy. A consequence is that there are plans for reductions of subsidies as well as of the coal production. The subsidies that will be accepted are supposed to go primarily to those companies that prove to produce with the highest cost efficiency.

At the end of 2001, total state aid over the previous eight years stood at nearly 60 000 million Euros, see figure 1. During this period, there had been a marked shift away from operating aid (i.e., aid to producers that could improve their economic viability, or at least reduce their losses) to aid to reduce production or close mines by July 2002, see figures 3 and 4.

4 France

The French government has supported the national coal industry since the 1994 National Coal Pact between Charbonnages de France (CdF), the state coal company, and French coal miners' unions. According to the agreement, indigenous coal production is to be progressively reduced and will cease completely by the year 2005, although the profitable operations of the company (such as power generation) are expected to continue or to be sold. In line with this agreement, production of hard coal has declined from 7 million tonnes (Mt) in 1995 to 4.1 Mt in 2000, a reduction of 43%. Industry employment has declined to 7 837 people (mining and non-mining employees), down about 45% over the past five years. France has experienced the largest contraction of the European coal producers,

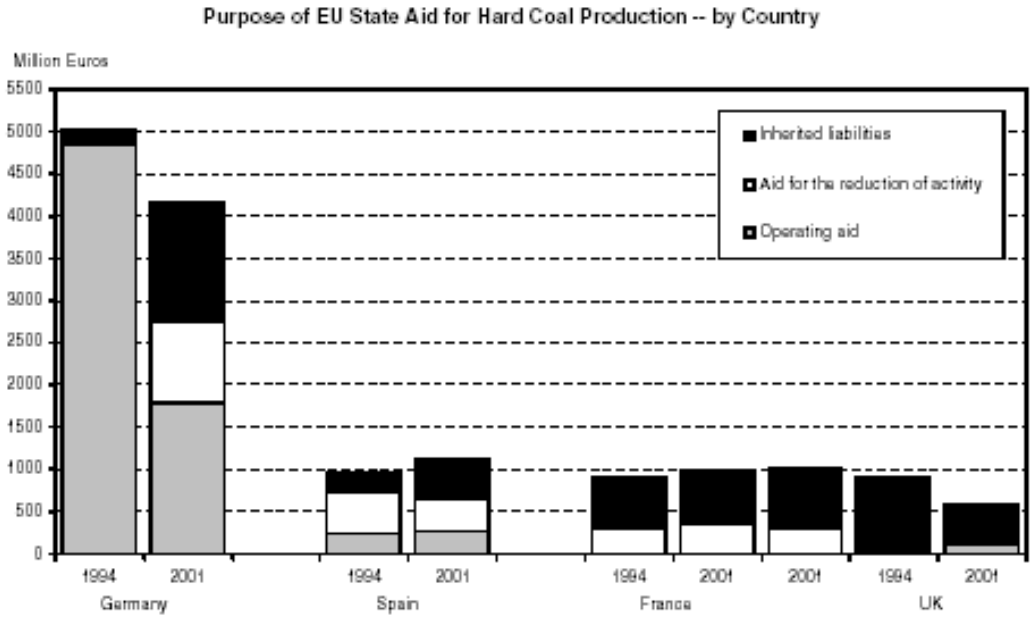

Figure 4: National purposes of EU state aid for hard coal production.
Source: Coal Information 2003 [2]

with production down by over 85% to 1.9 Mt from 1992 to 2001. In 2003, France was expected to end coal production in 2004, one year earlier than planned because of technical mining problems and accumulating losses.

Since 1997, state aid for the industry has come in two forms: a contribution to social security costs associated with restructuring the coal industry; and loans and a capital contribution (dotation en capital), applied directly to the company's balance sheet. The latter contribution is used to inject capital into the company, permitting it to borrow to cover operating losses. As can be seen from figure 4, the amount dedicated to cover the costs related to reduction of activity has increased by about 100 million Euros from 1994 to 2001, while the amount set apart for inherited liabilities has remained relatively stable in the same period. The French government considered about FRF 2.2 billion of the aid for 2000 as supporting current operations. In May 2001, the European Commission authorised France to pay 991.4 million Euros in state aid to the coal industry, see table 2, and most of this was used to reduce activity.

France, Coal Production 1990-2002

	1990	**1995**	**2000**	**2001**	**2002, est.**
Production, mtce	11.8	8.6	3.5	2.3	1.8
Imports, mtce	19.5	13.7	19.3	16.6	18.1
Exports, mtce	0.9	0.7	0.8	0.6	0.5
Authorised Aid, mEuro	-	669.2	1010.2	991.4	-
Aid/production,Euro/tce	-	77.8	288.6	431.0	-

Table 2: Source: Coal Information [2] and European Commission [7]

5 Germany

The German hard coal industry has a long tradition of benefitting from state aid. Coal is Germany's only substantial domestic fuel source and the government considers maintaining hard coal production capacity critical to the country's energy security. As a result, Germany has subsidised and will continue to subsidise the production of hard coal in order to maintain a cadre of working coal professionals. The coal industry is also a major employer in Germany and the municipalities are highly concerned about the unemployment that reduction of activity necessarily implies.

In 2002 the European Commission authorised 4,156.7 million Euros in aid to the German coal industry, see table 1. This is by far the highest amount of state aid authorised that year. Even though the subsidising of the coal industry in Germany will continue at a greater scale than in the rest of the topical Western European countries, Germany has, like all former subsidising countries, experienced more or less the same shift in arguments in favour of subsidies over the last decade. From declaring that virtually all state aid to the hard coal industry was operating aid in 1994, only 43% of the aid authorised in 2001 was operating aid, 23% was for the reduction of activity and the remaining 34% for inherited liabilities [2], see figure 4.

The Agreement reached on coal subsidies in March 1997 between the Federal Government, the governments of the coal mining Lander, the mining industry

and the trade union (the coal compromise - Kohlenkompromiss) specifies that, from 1998 onwards, there would be a financial ceiling on subsidies which where supposed to decrease from 9.25 billion DEM in 1998 to 5.5 billion DEM by the year 2005, a reduction of 68 percent. In 2001 production was planned to decrease from 47 million tce to 37 million tce by 2002, and could decrease further to around 30 million tce by 2005. Compared with 1992, the year before the current policy framework came into force, Germany has actually reduced production by 44 Mt or about 60% in 2002, see table 3. This reduction in both production volume and susidies at the same time, makes the real reduction in subsidies less impressive than the total amount of reductions. The real reduction of subsidies is expected to be from 196,8 DEM per tce in 1998 to 183.33 DEM per tce in 2005, in other words, a reduction of only 7.3 percent. The hard coal production is further expected to fall in line with reductions in financial assistance according to the agreement from 1997, and then stabilise at a non defined level considered necessary for energy supply security.

Germany, Coal Production 1990-2002

	1990	**1995**	**2000**	**2001**	**2002, est.**
Production, mtce	174	112.7	86.6	83.1	84.1
Imports, mtce	16.4	17.5	31.7	37.5	35.0
Exports, mtce	11.7	2.8	0.8	0.7	0.6
Authorised Aid, mEuro	-	4890.9	4693.7	4156.7	-
Aid/production,Euro/tce	-	43.4	54.2	50.0	-

Table 3: Source: Coal Information [2]and European Commission [7]

As domestic production declines, Germany is emerging as a significant coal importer. Gross imports of hard coal, coke, and briquettes have, according to the Energy Information Agency (EIA) [3], more than doubled since unification, and in 2001, for the first time ever, the consumption of imported coal exceeded the consumption of domestic coal. The Federation of German Coal Importers expects German hard coal imports to increase over the next 20 years, as nuclear power is phased out and domestic coal production declines.

6 Spain

Spanish coal is too expensive to be competitive in a free energy market, with indigenous coal production costs amounting to about twice the international production costs [3]. To be able to sustain any coal production at all, the Spanish government subsidises coal production. Spain accounts for about 13% of the world total subsidised production and for 2001, the European Commission authorised 1069.1 million Euros in aid to the Spanish coal industry, see table 1. Compared to Germany, Spain has made use of relatively little operating aid, but although the intentions are to reduce this category of aid (and Germany has kept to these intentions), the amount has remained stable at around 200 million Euros per year, see figure 4. In contrast to both Germany and UK, the total amount of subsidies has increased in the period from 1994 to 2001 thanks to the almost 100% increase in aid given to cover inherited liabilities while the aid for reduction of activity has declined.

Spain, Coal Production 1990-2002

	1990	**1995**	**2000**	**2001**	**2002, est.**
Production, mtce	17.0	14.6	10.9	10.5	10.0
Imports, mtce	10.2	13.0	19.0	16.6	21.4
Exports, mtce	0.0	0.1	0.8	0.6	0.7
Authorised Aid, mEuro	-	1055.2	1121.1	1069.1	-
Aid/production,Euro/tce	-	72.3	102.8	101.8	-

Table 4: Source: Coal Information [2] and European Commission [7]

Like the other European coal producers, Spain lowered its production in the period of the last regulation although not as much as the other producers. From 1992 to 2001 production was reduced by over 5 Mt or some 28%, see table 4. According to the new EU regulations that took effect in July 2002, Spain is therefore expected to further lower its coal production by 65% over the next ten years. Also, coal mines that do not improve their economic viability, will only be able to receive production subsidies until 2008. Spain is one of three EU countries that will be permitted to continue coal production for reasons of economic security, and

hence will continue to receive subsidies for more competitive mines. The current coal restructuring plan, the third since 1989, is based on agreements between the Ministry of Industry and Energy and the coal mining unions. The coal plan sets guaranteed consumption levels of domestic coal for each of 15 power stations for the years 1998-2005, while reducing these guaranteed levels by 28% over this period . Thereafter, the size of the industry will be dependent on the continuation of EU-authorised subsidies. The plan also specifies that prices for hard coal are to be freely negotiated based on conditions prevailing in the world market, taking account of the fact that the coal stations using the domestic coal are inland and would face significant transportation costs if imported coal were used.

IEA [1] reports that in addition to direct support of the industry, the government's electricity reform legislation (The Electricity Act 1997) contains two provisions related to support for the coal mining industry. Under Article 25.1 the government may provide for up to 15% of total primary energy required for power generation coming from domestic fuel sources. This security of supply provision follows Article 8.4 of the EU Electricity Directive. In effect, it gives the government the ability to require the use of domestic coal. Secondly, the fourth Transitory Provision of this Act establishes a provision to pay utilities a premium to use the quantities of domestic coal. Where applicable, these incentives shall incorporate a maximum average premium equal to 1 peseta per kilowatt hour for those generation stations insofar as they have actually used domestically produced coal and for the amount equal to their consumption solely of domestically produced coal. This incentive is necessary because otherwise the power utilities could use more imported coal at their power stations on the coast, where inland transportation costs are not significant. The government also pays incentives to use brown coal, lignito pardo, to be consistent with the treatment of hard coal. The government sets out the size of the payment for each power plant in an annual Royal Decree. The estimated total incentive payment for use of domestic coal during the ten-year transition period is approximately ESP 295 billion, which includes a payment of ESP 41 billion for the utilities to maintain stocks of domestic coal. The government raises the money for this payment through the costs for transition to competition (CTCs) which are charges to electricity consumers to pay for stranded costs but also include a separate component to cover the costs of the

coal incentive. The CTCs (for the stranded costs) cover a 10-year period (1998-2007). The European Commission must approve the CTCs. As these amounts are paid as incentives to utilities, rather than transfers to coal companies, they are not counted as state aid to the coal industry.

Despite the electricity act of 1997, Spain now experiences increased pressure on coal as the electricity market privatises, and as electricity generation will no longer be a captive market for domestic coal. Imports of foreign coal are already on the rise, and electricity generators are looking more to natural gas.

The coal sector now employs only half of the number of people it did a decade ago. Most of those employed are in the Asturias region, where the jobs are badly needed. It would be difficult to completely phase out coal mining because of this region's dependence on the industry for employment.

7 United Kingdom

The UK coal industry went through a substantial restructuring process during the 1990s. This has resulted in a great reduction in production volumes and a relatively dramatic loss of jobs. Of all the EU coal producing countries, the UK has seen the largest absolute decline in production since 1992, by over 51 Mt or some 60%. Only from 2001 till 2002 coal production in the UK fell by 7.5% from 31.9 Mt to 29.5 Mt, see table 5. Total production is now less than one-third of the total amount produced in 1990. At the same time, however, the restructure process has made the remaining industry far more competitive than that of the rest of Europe. Of the countries in the EU, only UK has production costs close to the world market price today. Production costs over the period 1992 to 1999 fell according to the EIA [3] by 35%, and the expectation is that these costs can fall further still, thereby allowing coal to remain a continually viable source of energy.

Although in the early 1990s the UK was one of the largest countries in terms of the volume of subsidised production, subsidies per tonne of coal mined were the lowest among the IEA countries. Formal subsidies to UK coal producers actually ended on 31 March 1995, and with the ending of the 5 year contract signed in 1993

between British Coal and the generators 31 March 1998, the UK coal production became truly unsubsidised. As can be seen from figure 4, the UK together with France, had the lowest level of subsidies in the EU, but while France still needed aid to reduce activity, the UK spent all its aid on inherited liabilities.

International markets and their suppliers as well as the British competitive ability changed however, and in November 2000, the UK coal industry received its first subsidies since 1995 after the European Commission approved a modernization plan and aid scheme. The aid, totalling 156 million and distributed in three tranches, was originally meant for mines/production units with long-term economic viability on the world market, but which were having temporary difficulties as they restructured in an effort to reduce production costs. This is reflected in figure 4 which shows that some of the aid given in 2001 was operating aid. For 2001, in accordance with the UK Coal Operating Aid Scheme, the European Commission authorised a total of 81.3 million Euros in aid to the coal industry, table 1, an amount which was supposed to be the last tranche of the aid package. Though scheduled to expire in July 2002, a fourth tranche was added to extend the scheme through to the end of the year. Only units that received subsidy payments in Tranche 3 were eligible to receive continued assistance in Tranche 4. The total amount of aid was not to exceed 110 million. Despite this aid, geological and commercial factors resulted in the closure of several more UK mines in 2002.

United Kingdom, Coal Production 1990-2002

	1990	**1995**	**2000**	**2001**	**2002, est.**
Production, mtce	76.6	45.8	24.9	27.2	25.2
Imports, mtce	14.7	15.7	21.3	32.6	26.4
Exports, mtce	2.6	1.2	1.0	0.8	0.8
Authorised Aid, mEuro	-	1622.8	151.5	81.3	-
Aid/production,Euro/tce	-	35.4	6.1	3.0	-

Table 5: Source: Coal Information [2] and European Commission [7]

8 New EU Countries

Countries in Eastern Europe are the dominant producers of the European hard coal, and their entrance to the EU will necessarily have consequences, for the national as well as the community policy on state aid to the hard coal industry. The countries which have had aspirations to join the EU, have for several years been carefully watching the development of the EU coal policy, and to a certain extent adjusted their own policy towards the coal industry to the EU practice. It was a premise that both Poland and the Czech Republic must be fully prepared for membership from the date of accession (1 May, 2004). Some industries like the steel sector in the Czech Republic, have managed to get exemptions. This may affect the coal industry, but no explicit exemptions are given for the hard coal industry in neither of the two countries. In other words this means that they must follow the rules laid out by the new Council Regulation on state aid to the coal industry from the date of entrance.

Previously under tight state control and subject to cross-subsidies and price controls, the coal industries of the former communist bloc are now being restructured. Both Poland and the Czech Republic have gone through fundamental reforms. The Polish restructuring programme on hard coal mining is by many, among them the World Bank which is in charge of many of the restructuring programs in the former communist bloc, considered one of the hardest restructuring programmes because of its social and economic repercussions. Both countries have more or less achieved economic viability, but the foreseeable increase in labour costs in the future could make further restructuring necessary.

Poland Coal production in Poland has fallen steadily over the last twenty years. In the period from 1990 till 2000 there was a reduction of 32.4% from 134.9 Mt in 1990 to 101.9 Mt in 2000. Production fell by 1.7% from 102.0 Mt in 2001 to 100.3 Mt in 2002, see table 6. The reform program calls for a reduction in production capacity by almost 12.7 Mt by 2006. The plan is to retain 34 mines with coal sales of 93.5 Mt in 2003, and 87 Mt by 2006.

So long as at least part of the Polish hard coal industry is state owned, the state has the ultimate responsibility for the incurred losses and it is fair to say

Poland, Coal Production 1990-2002

	1990	**1995**	**2000**	**2001**	**2002, est.**
Production, mtce	134.9	130.1	101.9	102.0	100.3
Imports, mtce	0.6	1.5	1.5	1.8	2.6
Exports, mtce	27.6	31.8	24.8	25.1	25.0

Table 6: Source: Coal Information [2]

that hard coal production in Poland is in general subsidised. The government is however, restructuring by closing loss-making mines and concentrating production in the remaining competitive operations. Rationalisation has reduced the number of mines to 42, and both the number of employees and output are decreasing steadily.

Kompania Wglowa has been created to take over the debts of the mining industry, restructure and run the remains more effectively under one leadership. Kompani Wglowa will take over 24 mines belonging to five companies, possibly making it Europe's largest coal company with production of 51 Mt per year and over 84 000 employees. The company has called for substantial state aid for its operations, and unions are pressing the government not to close any mines.

The restructuring of coal mining scheduled for 1998-2002 has been implemented without delay, a considerable achievement in the opinion of the European Commission. In the period covered by a report on the adaption of EU regulations in preparation for membership [8], a number of mines were closed, mining capacity was reduced and the privatisation of the first two profitable mines was initiated. Political pressure from trade unions forced the government to suspend the restructuring programme adopted in November 2002 however. The government responded by adopting a new restructuring programme for the years 2003-2006 in September 2003. Problems remain, nonetheless. The net financial position of the sector remains negative and a rapid increase in debt utterly worsens the equity situation. At the same time productivity still falls short of international standards and wages are expected to increase with the entrance into the EU. The European Commission recommends that sufficient budgetary appropriations

for the implementation of the programme need to be ensured. The future role of coal, imported or produced in Poland deserves enhanced attention in the country's energy planning. [5]

All in all, the conclusion of the European Commission is that Poland has adapted its basic legislation to contain the basic principles of state aid. The performance with regard to establishing a credible record of enforcement is rather more variable but was in 2003 expected to be functioning by the time of the entry in May 2004 [5].

The Czech Republic Coal production in the Czech Republic amounted to 14.5 Mt in 2002, see table 7. Over the last twenty years, there has been a reduction in coal production of 48% from 27.7 Mt in 1980 to 14.5 Mt in 2002. The last couple of years however, there seems to have been a relatively stable production level around 14-15 Mt per year, and the reduction in production from 2001 to 2002, was only expected to be at about 4%. This is somewhat surprising when taking into account the fact that the country has been going through restructuring programmes, including reduction schemes, in order to prepare for the entrance in the EU in May this year.

The Czech Republic, Coal Production 1990-2002

	1990	**1995**	**2000**	**2001**	**2002, est.**
Production, mtce	49.6	39.4	35.7	36.1	34.8
Imports, mtce	2.2	2.5	1.5	1.6	1.6
Exports, mtce	10.4	10.8	8.3	7.9	7.4
Aid/Production, USD/tce	-				4.6

Table 7: Source: Coal Information 2003 [2]

Taking a look at the reports of the European Commission regarding the Czech Republic's preparations of membership, we find that they report little progress with regard to the restructuring of the coal sector in 2001 [9]. There exists, however, a restructure plan for the Czech coal production, a plan that includes measures to increase the efficiency and privatisation process in the industry . The IEA [2] for example reports that from the end of 1998, all Czech hard coal pro-

duction has been amalgamated under Ostravsko-Karvinske Doly, which operates six mines near Karvina and one mine at Kladno.

Current objectives of the restructuring policy include, again according to the IEA [1], the continuation of progressive scaling down and phasing out of coal mines according to EU procedures (ECSC), the completion of the privatisation of coal companies and ensuring the long-term utilisation of coal resources.

The implementation of the restructuring policy of the coal industry has been financially supported by the state budget for three main purposes:

1. Technical closure of the mines
2. Restoration of mining damages
3. Social and health benefits for redundant staff, unemployed and pensioners.

Some support also goes to mitigate negative social and environmental impacts of the restructuring plans. The sharp cutback in personnel in the mining areas of North Bohemia and North Moravia where it constituted a mono industry, serves as an example of severe social impacts of the restructuring. These regions have to be offered enough financing to be able to give the needed support to the large unemployed labour stock and to try vitalising the livelihood in those areas.

The total amount of aid allocated by the Czech Government for mining sector restructuring was in 2002 equivalent to CZK 174/tce (US$ 4.60/tce), a relatively modest level compared to other IEA countries [2]. State subsidies in general are used to close the mines and mitigate their environmental and social consequences; they are in other words not used to support production directly as can be seen from table 8. From this table we can also recognise a trend of relatively comprehensive reductions in aid for technical phase out and an increase in aid to be able to meet social obligations.

In sum, the Czech Republic was in 2003 meeting the majority of the commitments and requirements arising from the accession negotiations in the area of state aid, and they seemed to have the necessary implementing structure in place to be

Aid for the Czech Republic Coal Industry 1994-2000, (mill CZK)			
Year	**Total**	**Technical Phase Out**	**Social Obligations**
1994	3345.1	2186.9	1158.2
1995	3286.7	1956.8	1329.9
1996	3591.0	2168.3	1422.7
1997	2727.4	1364.5	1362.9
1998	3093.9	1690.2	1403.7
1999	2682.0	1206.1	1475.9
2000	2892.6	1255.9	1636.7

Table 8: Source: Coal Information 2001 [1]

able to introduce all these new EU regulations. Further efforts were needed, however, to raise awareness of state aid rules among all market participants and aid grantors. In order to complete preparations for membership, the Czech Republic had to continue implementing the application of EU State Aid regulations for the hard coal industry as well as abolishing any import restrictions for hard coal upon accession.

9 Concluding Remarks

For many years now, the European coal production has been characterised by overcapacity and uncompetitive high production costs; in Spain and Germany for example, average production costs are around three times the world market price. This fact has more or less necessitated a new policy to develop. When we look at reports from the IEA, the World Bank and the European Council, it seems like the EU policy on state aid to the coal industry that has been seriously implemented the last decade, combined with a general restructuring of the industry in the eastern bloc of EU countries, is actually having some of the wanted and expected effects.

Production has decreased, and in many countries stopped altogether during the last decade. The European production level is accordingly at its lowest for many years. By the end of this year the last remaining French coal mines are expected

to be shut down and the production level will be reduced substantially in both Spain and Germany by the end of 2005.

At the same time as production levels are lower, the trend is that the total amount of subsidies to the industry is reduced. According to the IEA [2], the outlook in the EU countries is for a continuing fall in subsidised production. A number of factors are assumed to support this trend and may thereby help reaching the final goal of the European Coal and Steel Community, namely to eventually eliminate subsidised coal production.

The IEA [2] reports that new mechanisms appear to have been developed to provide support to the coal industry however. Security of energy supply is primary rationale. For example, both Spain and France have transposed Article 8.4 of the EU Electricity Directive into their national electricity legislation, which permits member states to give priority to indigenous fuels in electricity production. On the other hand, electricity market liberalisation will probably make electric utilities increasingly reluctant to take on obligations to purchase domestic coal when this is not competitive with either imported coal or with power generation by other means.

As the agitators of free competition and a more effective structure of the coal industry have won increasingly more influence, there has been a shift in argumentation for subsidies in the EU. From a policy founded on national or regional economic concerns as well as more social concerns such as the unemployment rate, the main argument in the new EU policy, is the the argument of energy security. The European Community has become increasingly dependent on external supplies of primary energy sources. In addition, the world political situation has brought a new dimension to the assessment of geopolitical risks and security risks in the energy sector. As a consequence, keeping a vital European coal industry is considered important in order to maintain a proportion of indigenous primary energy sources and thereby boost the European energy security. An implication of this strategy is the necessity of a certain level of subsidies to the coal industry, an implication that stands in sharp contrast to the Coal and Steel Community policy.

At the same time, there is a growing awareness of the global effects of producing, consuming and trading hard coal. It is a fact that the coal market is an international and well functioning market where, among other things, technology transfers are highly visible and also considered important. The EU brings up the transfer of clean(er) technology to the rest of the world more or less as a responsibility. Some of the EU producers are making use of quite sophisticated and environmentally friendly technologies, and they think it necessary to keep at least a certain level of production to maintain the expertise connected to these technologies. This in turn, is expected to help achieving the desired global reduction of climate gasses.

The imports of hard coal to the EU are expected to increase as a consequence of the shutting down of production facilities and the high coal prices that can be expected when subsidies are withdrawn. The impact of subsidy removal will depend on country-specific circumstances. In England there was actually no such extreme import increase during the great cut downs in production during the 1990s. The use of natural gas on the other hand, had an upswing in this period. As domestic production declines in Germany however, the country is emerging as a significant coal importer. In Spain there are high transportation costs related to imported coal, especially inland, and the importation is not expected to increase very much. The use of natural gas is in Spain, like in the UK, more likely to increase over the next years.

There is a growing awareness of the environmental damages from coal production and consumption. Although reduced subsidies are often meant to increase efficiency and production with the vital companies, we have seen that a reduction in subsidies in fact leads to a reduction in production levels. A reduction of subsidies is therefore by many welcomed as a means to reach the goal of less coal production and consumption. A recent analysis by the OECD [6], however, looks at ending coal production subsidies as part of a broader study of the environmental effects of liberalising trade in fossil fuels. The analysis forecasts that the elimination of such producer subsidies would lead to both substitution by imported coal and an increase in gas-fired power generation over a business as usual case.

It is clear that while state aid may have been successful in dealing with social problems and in evening out short-term market movements, aid has not been successful in providing a long-term economic future for the greater part of the industry. Although the aid is aimed at making the coal producers more efficient and independent of aid in the future, in practice, most coal producers are still highly dependent on financial support, and reductions in state aid seems always to lead to production cuts. According to the IEA [2], the new policy approach runs the risk of establishing an industry with a core of uneconomic mines that have little prospect for improvement. Some of the UK mines approach international cost levels, but the majority of European mines will remain overwhelmingly uncompetitive.

There will however, remain a certain level of hard coal production in the EU states in the foreseeable future based on the wish, or, as some see it, the responsibility, to provide a reliable energy security for Europe, to keep an updated production expertise and to show social concern. Although the EU policy is quite clear in its wish to reduce state aid to the industry in general, the hard coal production will, more likely than not, be dependent on, and receive, a relatively extensive amount of financial aid.

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