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PRIORITIES IN ENERGY POLICY AND THEIR ECONOMIC IMPACT
IN THE PRESENT SUPPLY SITUATION

Report on a meeting of trade union experts
held under the Labour/Management Programme

ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

Paris 1991

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Experts' Meeting 1991-1

PRIORITIES IN ENERGY POLICY AND THEIR ECONOMIC IMPACT
IN THE PRESENT SUPPLY SITUATION

Report on a meeting of trade union experts
held under the OECD Labour/Management Programme

(Paris, 11th-12th March 1991)

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Summary

Under the OECD Labour/Management Programme for 1991, a meeting of trade union experts on "priorities in energy policy and their economic impact in the present supply situation" was held in Paris on 11th and 12th March 1991. The meeting was prepared in collaboration with the Trade Union Advisory Committee to the OECD (TUAC).

Priorities in energy policy have changed over time depending on economic, political and social developments. In the seventies, the improvement of energy security by emergency preparedness planning, diversification of supplies and efficiency improvements were the main concerns. During the past few years, environmental concerns have assumed greater importance for policy makers. Developments in the Gulf have demonstrated that concerns about security of energy supply must not be neglected. The meeting looked at energy strategies which were being pursued in the present energy situation. It also dealt with the instruments which governments were using or considering for the implementation of their energy policies, for the impacts of government actions on the energy sector and the economy as a whole can be very different depending on the instruments and it is important to choose those instruments which achieve both energy policy and environmental goals with the least economic and social distortions.

Below is an overall report of the discussions of the meeting of experts, prepared by Mr. Lionel Walsh, Consultant, International Energy Agency, who was designated as General Rapporteur for this activity.

A list of the participants in the meeting is given in appendix.

THE OPINIONS EXPRESSED AND ARGUMENTS EMPLOYED IN THIS REPORT
ARE THE RESPONSIBILITY OF THE AUTHOR
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FINAL REPORT ON THE MEETING

by

Mr. Lionel WALSH
Consultant
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ITEM I

The oil market situation and recent decisions of the International Energy Agency relating to the Gulf crisis

The first session started with an analysis of IEA actions during the Gulf crisis by Peter Huggins, Head of the Emergency Planning and Preparedness Division of the IEA, and Philip Starling, Head of the Oil Industry Division. Mr. Huggins described the pre-crisis situation which had lulled IEA countries to some extent into a false sense of security and created the impression that IEA emergency mechanisms were an insurance policy whose likelihood of being used was becoming somewhat remote. The Iraqi invasion caught the world in a "relaxed and potentially vulnerable posture". IEA oil demand had been growing steadily for several years by one or two percent per year. Imports were growing, particularly in the United States where domestic production was declining. Tanker and refinery capacities were being used close to their limits. On the plus side, stocks were unusually high.

The crude oil supplies from Iraq and Kuwait lost because of the United Nations embargo amounted to 4.3 million barrels per day (mbd). But supplies remained flexible and the loss was made up, mainly by Saudi Arabia, with other exporting countries also contributing.

Concern about products

Product supplies caused some concern, with the loss of oil product imports to the IEA from Kuwait. There were fears of regional shortages of specific oil products, aggravated by possible surpluses of heavy fuel oil. In the event, the international oil industry showed considerable flexibility in using unusually heavy crude oils and in adapting the flow of oil. Large amounts of refining capacity were de-mothballed in Japan, and the temporary development of oil product exports from the United States reflected the considerable sophistication and upgrading ability of the American oil industry. The American industry began to import heavy and difficult crudes and to export limited but significant amounts of products processed from them. Prices during the crisis were high and erratic, driven more by war fears than by market fundamentals. At no stage were there actual or imminent shortages of oil to the IEA which would justify formal emergency oil sharing measures. In the specific case of aviation fuels, there were signs of a supply pinch, reflecting the fact that refining systems were being stretched to the limit to produce middle distillates.

The IEA contingency plan

On 11th January 1991, the IEA Governing Board agreed on a programme of 2.5 mbd of oil stock draw, saving and replacement of oil in the event of war. They reasoned that the risk of losing oil supplies from the Gulf was a real one, and the IEA must be ready to demonstrate its ability to respond promptly and effectively to a supply disruption. With the start of military action, the programme was implemented by the Executive Director on 17th January. The Allied advantage which emerged within hours of the outbreak of war had an immediate impact on markets. The IEA's 2.5 mbd programme also had a calming effect.

Mr. Huggins stressed that all IEA mechanisms for dealing with oil supply disruptions are based on volumes rather than prices, since the Agency is concerned with the fundamental physical oil supply and demand situation. "Actions of governments in this area cannot be determined by random and speculative fluctuations in the markets whatever shrill voices may be heard urging the IEA to carry out tasks outside its mandate such as behaving as though managing a commodity stabilization scheme."

Philip Starling said the price of Brent crude during the first seven months of 1990 was between \$15 and \$20 per barrel. The Iraqi occupation of Kuwait pushed the Brent price to over \$30. The loss to world markets of 4.3 mbd through the United Nations embargo against supplies from Iraq and Kuwait was the equivalent of some 8 per cent of world supplies, at a time when there was little spare capacity. A demand surge for petroleum products due to consumers building their stocks had started in July and continued in August. Brent peaked at \$40 in late September in light of a tight supply situation. People were unaware how quickly OPEC would make good the lost production, following its decision to do so on 29th August. There was a dramatic change in the supply situation in the fourth quarter due to reduced demand through lower economic growth, milder weather and the effect on demand of higher prices. Finally, because of the early stock build, consumer stock-building was reduced. The combined effect was that fourth quarter demand was about 1.3 mbd lower than in the same period a year earlier. On the supply side, a faster than expected increase in OPEC supplies was accompanied by slight increases by non-OPEC countries, including the United States. By December, oil production was above the pre-crisis level, an amazing achievement. The Brent price gradually receded to the mid-20s.

In early January, the likelihood of war increased. There was another bout of consumer stocking and the price of Brent crept up again to about \$30 per barrel. At this time, the IEA was preparing its contingency plan. The outbreak of war on 16th January was marked by significant allied success through air strikes against Iraqi targets. The IEA also announced on 17th January that it was making 2.5 mbd available to the market. Crude oil prices declined during the day by \$10, the largest single day's fall recorded. It will never be known how much of that was due to the initial success of the coalition forces and how much to the IEA announcement. Probably it was mainly the favourable war news because prices had been falling before the IEA announcement was made.

The important factor from the oil market viewpoint during the period of the war itself from mid-January to mid-February was that crude supplies were

almost unaffected. Grave concerns about a major war in the area where the biggest concentration of the world's oil reserves are proved unfounded. While crude supplies were satisfactory, products presented a different picture. An exceptionally cold winter in Europe coupled with military demands in the Gulf led to a temporary tightness in middle distillates. But this was quickly resolved and by the time the war ended on 27th February, crude and product prices were back to where they were at the beginning of the crisis.

Oil price effect much less severe this time

Making a historical comparison with previous crises, Mr. Starling noted that the 1973 oil crisis produced a quadrupling of prices. The 1979 one, far more severe in absolute terms, produced a tripling of prices. The price of crude stayed high for a prolonged period and then, in 1986, there was a precipitous fall. In 1990, despite a brief surge, the average price of Brent crude was only \$10 per barrel higher than in 1989, or the first seven months of 1990. There was nothing like the rises of previous upheavals. The 1990-91 price spike only lasted for a few months compared with the years after the 1979-80 crisis. Today's crude prices are as low as they have been in real terms since about 1974.

Tracing the progress of oil demand, Mr. Starling noticed that it had been a "humpy ride" -- down by 3 mbd after the 1973 crisis, recovering strongly after two years. The fall was doubled to around 6 mbd after the 1979-80 crisis, and it lasted twice as long. Recovery started in 1984, and there was a major surge in 1986 due to the sharp price decline and a protracted period of economic growth in the late 1980s. By 1990, oil demand was higher than in 1979. By 1990, although demand fell by 1.3 mbd in the fourth quarter compared with the same quarter of 1989, it actually rose for the year as a whole. The sharp annual fall in demand characteristic of previous crises did not occur. Demand rose by about 1 per cent in 1990, and was expected to increase by the same amount in 1991.

Outlining how world demand was met between 1973 and the present, Mr. Starling described a big increase in non-OPEC output, reflecting the advent of North Sea, Alaskan and other supplies, from 17 mbd to a peak of about 26 mbd in 1985 and then remaining constant. OPEC had to act as a swing supplier. Its crued oil production was 31 mbd in 1979, but that performance was squeezed remorselessly to as little as 16 mbd in 1985. Saudi Arabia bore the brunt of the production cuts, with its output down from 10 mbd in 1979 to as low as 2.5 mbd in 1985.

Swing producer no longer

Saudi Arabia then refused to continue acting as swing producer, boosted output and caused over-production. This precipitated the decline in prices experienced in 1986. Since then rising demand produced gradually tighter markets and by 1990 demand for OPEC oil was up to 23 mbd.

At the beginning of the 1980s, the oil industry had built up substantial spare refining capacity, but declining demand caused the industry to shut down the oldest and least efficient plant. Capacity in the OECD fell by nearly

10 mbd, or 20 per cent, from 1980 to 1986. Then demand increased again and the result was a tighter refining situation because of reduced spare capacity. The 1990 crisis led not only to the loss of crude supplies, but also to the loss of Kuwait refinery capacity -- about 700 000 bd of very efficient capacity. This also substantially tightened the market.

Comparing the recent crisis with its predecessors, Mr. Starling noted that the price change was much less severe. In the 1980s prices stayed high for years; this time it was a matter of months. The extent was less dramatic. There was no tripling of prices. The increase was more like 50 per cent. The effects were cushioned for most countries by the fall in the dollar. There was a more complete pass through of price rises. Governments made no efforts to shield consumers by lowering taxes on oil. That meant a faster demand response. Over the 1970s and 1980s, the amount of oil needed in the OECD countries to produce a unit of GDP had gone down by about one third. This was due to increased energy efficiency, and substitution by coal, nuclear and gas. Thus the world was less dependent on oil. The weak point was lack of spare refinery capacity. Fortunately, stocks were unusually high at the start of the crisis, and demand fell with exceptionally mild weather at that time. But for those factors the situation could have been much more serious.

Trade union representatives then raised questions on the future outlook for energy security and the stabilization of prices, on the effect of higher oil prices on other energy prices, and on the resulting economic disruption. They noted the early build-up of company stocks in the crisis and asked who had lost and who had gained from this. They also asked why the IEA waited until the outbreak of hostilities before intervening in the market and did not act earlier. A central question that emerged from the general discussion was what action could be taken to stabilize oil prices up to 2005, and what role the IEA could play.

Positive price effects

Mr. Huggins said that from the viewpoint of emergency preparedness, allowing the price mechanism to function during the crisis had positive rather than negative effects. Prices dampened demand and they also sent signals to the market to produce changes in flows in products, particularly between the United States and other parts of the world. US refiners had a strong incentive to refine unusual grades of crude oil and export them elsewhere, easing tightness in supplies of certain products. Such developments would dissuade the IEA from any micro-management of the supply of oil during an emergency. Prices did a good job in getting the oil to where it was really needed. An important exception was aviation fuel -- of which serious shortages developed -- and it would be necessary to look at ways of improving refinery flexibility in the months to come. Mr. Starling said that for all commodities, nobody had been able to develop a lasting mechanism for controlling price.

One trade union expert said that a great deal had been said about supply and demand but his recollection was that \$40 oil was the result of speculation on futures markets. It was necessary to be specific about the market mechanisms involved in various price movements. At one stage, the US administration proposed that IEA should start releasing stocks just to fight prices, not to fill the gap. The aim would have been not to use the IEA stocks

as strategic stocks, but as some sort of buffer stocks. Calling for a re-examination of these questions, he said the OECD countries had been lucky that the situation was brought under control. The decisive factor had been a tremendous increase in production. This raised the issue of some form of co-operation or agreement between exporters and importers. TUAC had been insisting on this idea ever since 1978. They never spoke of copying commodity agreements. Their analysis was based on the fact that the oil exporting countries were tremendously dependent on the importing countries. It was not just a question of restraining supply, but also the dependence of oil exporters on imports of food. Now dependence for defence was an additional consideration. Various commodity agreements had played a useful role in the past.

Mr. Starling said that, if anything, the futures market probably had the effect of restraining prices rather than the reverse, although this could not be proved. Markets had reacted without the benefits of hindsight and there had been a genuine tightness, particularly for jet fuel. OECD countries got by but some of the non-OECD countries were really scrambling. On how a producer-consumer dialogue could help to regulate prices, it should be remembered that OPEC had been trying to control prices ever since it was created. It was never successful. If consuming countries became involved in this process, how would they help to achieve something OPEC could not achieve?

Mr. Huggins noted that, during the crisis, the IEA consistently told the world that oil stocks were high and quite well balanced between crude and products. Market operators seemed not to get the message, which may have been overlaid by fears of what might happen when fighting started. It was to be hoped that market operators in future would take what the IEA had to say about the supply, demand and stock position more seriously.

The attractions of price stability

A trade union expert from Norway stressed the unpredictability of oil prices. He said with output of 1.9 mbd of oil and 30 billion cubic metres of gas, the oil and gas sectors were highly important to Norway. They would like a price they could count on. Oil companies expected instability. They fought to keep costs down through greater efficiency and reducing the work force, and introducing new technology. This was because of price fluctuations. The most that could be said about future prices was that they were likely to vary from year to year, but slowly to increase. Mr. Starling interjected that the oil companies' objective in keeping costs down was to preserve their profit margin, not to force down prices. On balance, most oil companies would also like stable prices because it was hard to plan when prices were fluctuating.

Another union participant said the IEA had been variously accused of complacency during the crisis and of disrupting markets by releasing stocks. It was all very well to say the market was a marvellous mechanism, but public confidence in the market was based on the belief that the IEA could intervene at any moment if it wished. This would not be a market mechanism but a government imposed intervention. There was an issue for trade unions in how far working people were convinced they should make sacrifices in their wage packets for price movements. It was not convincing for a worker who sees oil

prices going up while the wage packet remains unchanged to be told: Don't worry the IEA is in control.

Further discussing the futures market, Mr. Starling said it should not be regarded as pure speculation. What it did was to allow companies and consumers to buy oil in advance. This meant that it became unnecessary to buy oil today. Since it was the oil today that was the problem, if anything the futures market dampened short-term volatility in prices.

A plan designed to create confidence

The IEA Executive Director, Mrs. Helga Steeg, said that at no time during the recent crisis in the Gulf had the oil supply situation been other than comfortable. She noted that at the end of August, OPEC countries, and particularly Saudi Arabia, the Emirates, Venezuela and Iran, decided to increase production. Nobody expected that the Saudis would do this to the extent that actually happened -- up to a total of 8.3 to 8.6 mbd. Outside the OPEC countries, the North Sea producers were able to boost output and there was also some increase from the United States and Canada. Conservation policies were imposed in some countries and finally the economic slow-down in the United States and some other OECD countries served to reduce demand.

Mrs. Steeg emphasized that the IEA contingency plan to offer 2.5 mbd to the market through a combination of stock draw and demand restraint in the event of war was agreed on 11th January. With the start of hostilities, the plan was activated in a matter of hours on 17th January. The objective was to bring confidence to the market that if production facilities were damaged, IEA governments would bring oil to the market as required.

Should this amount prove insufficient, the IEA stated publicly that the amount would be increased. The accent was on flexibility, meaning that the IEA countries would make oil available according to needx. Prices fluctuated strongly throughout the whole crisis, not because of the fundamental supply and demand situation, but because of what became known as the war premium. The price fall immediately after the outbreak of war was due to the market's perception that the war was going well insofar as it related to production capacity. This happened before the IEA contingency plan was implemented. The IEA action was not a decisive factor.

To the criticism that the IEA should have introduced emergency measures earlier than it did, Mrs. Steeg said this would not have been the right thing to do since stocks could not be used to influence prices. This was particularly true at a time when price movements were influenced by fears of war and its consequences rather than the supply and demand balance. Mrs. Steeg did not see any shift likely at the IEA's June ministerial from the view that government stocks should be used only to cope with physical shortage of oil, and not to intervene in the market in the classic pattern of a commodity agreement. "This is neither possible, nor desirable, and it would be much too expensive", Mrs. Steeg said. "It would be unsustainable, because even if there were agreement on target zones for when to intervene, how can one judge the economic externalities like economic growth, inflation rates and exchange rates that could not be constantly adjusted. There is no departure from this philosophy."

Some OPEC countries had accused the IEA of causing the decline in oil prices, Mrs. Steeg said. This was not right. When the oil price fell, it was a response to underlying factors. The price rise had been due to the negative effects associated with perceptions of war and its consequences in the Gulf region. Mrs. Steeg said past commodity agreements had been a dramatic failure and the tin agreement was the most devastating example. Countries and traders lost an enormous amount of money through commodity agreements, and the mistake should not be repeated. Even central bank intervention on foreign exchange markets was not wholly effective, and monetary authorities had learned that it was never possible to intervene against a fundamental trend.

A lesson of the crisis for the IEA countries was that energy policy must not be neglected. This meant that the drive to improve energy efficiency must continue, alongside efforts to reduce oil's share in primary energy requirements. This meant diversification into coal, gas, and nuclear power to the extent it was acceptable and safety standards could be met, and into renewable energy sources to the extent that they were economic. Acceleration of the development of new energy technologies was another essential requirement.

The producer-consumer dialogue

On the proposed producer-consumer dialogue, Mrs. Steeg stressed that producers were not only OPEC countries. They also included IEA countries, like the United States, the United Kingdom, Norway, Canada and Australia. Non-OPEC producers numbered many other countries that were members of neither OPEC nor the IEA, such as Mexico, Oman, and the Soviet Union. The impact of any contacts -- a word she preferred to dialogue -- would be of enormous importance to East European countries apart from the Soviet Union and to developing countries. IEA Member countries therefore clearly stated that agreements or arrangements between producer and consumer countries on oil prices or volumes were neither feasible nor desirable, nor would they be effective. However, it would be possible to envisage better relations with individual OPEC countries -- something the IEA already "takes on board". Topics that could be discussed were more transparency in oil markets, meaning exchanging views on the energy outlook and statistics. It would also be feasible to discuss industrial co-operation between IEA and producer countries. Over the coming years beyond the end of the century more reserves would need to be opened up in the producer countries, and they in turn needed money and technology. This would require discussions and an investment that would induce banks and companies from OECD countries to establish themselves on a long-term basis. There could be no one way street. Companies would need a more stable background for investing money and technology. Producing countries in turn would need more opportunity to invest in OECD economies, in refineries and in other oil-related activities. An example were Venezuela's activities in the United States. In Germany there were industrial co-operation agreements. This was an area ripe for improvement, and more promising than any thought of intervening in the short-term price market.

Opening discussions on Mrs. Steeg's intervention, a British trade union expert said Mrs. Steeg was saying that under present circumstances you could not "buck the market" and this might well be true. But what about the future? There must be some contingency arrangements for the IEA to intervene if the

situation changed. Proposals now being discussed in the EC Commission for security planning and co-ordination suggested putting a premium on security of supply to justify some level of intervention. This would put a value on social and strategic objectives as well as financial ones. In terms of energy planning, like efforts to bring about diversification of energy sources, the problem in the United Kingdom was one of investment barriers associated with the oil price.

Mrs. Steeg said she did not believe it possible to have long-term planning in terms of spelling out a blueprint based on forecasts. All experience of the 1970s and 1980s showed that forecasts tended to be wrong. Investment based on incorrect forecasts had to be cut back, as demonstrated in the case of the oil industry in the mid-1980s. It also applied to the coal industry in the United States, Canada and Australia. The IEA did not believe it was possible to embark on long-term planning with precise predictions of supply and demand, and calculations of what the price should be.

Security of demand unattainable

OPEC representatives regarded as against their interests the actions of IEA governments in giving incentives to efficiency and conservation, and encouraging energy sources other than oil. In a dialogue, it had to be absolutely clear that consumers did in fact have different interests from producers. Mrs. Steeg recalled that the OPEC Secretary General, Mr. Subroto, had said that security of supply had to be balanced against security of demand. But there could be no security of demand, and this was illustrated by the fact that macroeconomists in the OECD, the IMF and elsewhere had to revise forecasts at least twice a year.

Mrs. Steeg voiced scepticism about proposals in the EC to introduce a \$10 a barrel carbon tax to limit greenhouse gas emissions from fossil fuels. One had to be extremely careful because it was not clear from which level a \$10 increase would be made. With demand growing more strongly in the developing countries, prices would increase. Even if there was a harmonized increase, the impact on international trade would be far from clear. If IEA countries did decide on a mixture of carbon tax and regulation, there would have to be very careful fine tuning to avoid damage to the world economy.

A trade union representative said nobody on the trade union side would disagree with the IEA's role as far as handling physical stocks was concerned. But given the fact that a situation like the Gulf crisis might recur, what remedies could be applied to avoid the sort of price rises that had been experienced? It was not right to write off the whole experience with commodity agreements as a total disaster. Was there a political window of opportunity, given the demise of OPEC? This should make it possible to work out some longer term producer-consumer relationship which would help the world to avoid the sort of situation just experienced in the Gulf. The trade union expert also asked whether the IEA should not look more positively at the possibility of using stocks for market intervention.

Other trade union representatives asked whether coping with environmental concerns might not be a means of introducing energy planning. The CO₂ problem was a global problem which needed international agreements for

its solution. By linking it with energy issues, it could lead to some sort of international energy plan.

Planning can have its uses

A trade union expert from the United States said the idea that the future could be planned was a crazy belief. But once such utopian notions were put aside, it still remained necessary to do something about the future. The conclusion had to be that planning means revising anticipations and objectives rather than establishing a prescription for the future. This was feasible and was exactly what the IEA in fact did. It did not matter if things developed differently from anticipated provided you had the mechanism to change policies in the light of reality. Some countries had gone far in abandoning energy policy altogether. The United States had abandoned interference, saying markets will take care of it. This resulted in waste and excessive consumption. The United States had not gone far in areas requiring long maturity periods, but had concentrated on areas that produced results fast. But in energy the vital areas tended to be those which required time to develop. He was not convinced that there was no possibility for co-operation between exporters and importers. The comparison with commodity agreements was misleading. Those producing countries which had wanted to impose a stranglehold on the whole world depended on the industrial countries for food, and now also even more for security and survival. There was no fantastic merit in their production increase. The OECD countries were in a position to deal with the producing countries one by one, or in small groups, rather than facing a cartel and reaching agreement with them on supplies and prices.

Expressing reservations about the negative views of IEA speakers about the efficacy of commodity agreements, the trade union speaker referred to the International Materials Conference after the start of the Korean war which managed to keep commodity prices reasonably under control throughout the war, a fantastic achievement. A war in commodity prices could endanger the world and this was one of the lessons to be drawn from the Gulf war.

Mrs. Steeg said there may be a political window of opportunity and this should be explored. But it had to be recalled that the last three oil crises were politically motivated, and the risk of a repetition remained. The search had to be for common interests, if that could be achieved. But it was an illusion to think it was possible to agree on a particular price level, or even a band of prices, and maintain it for a given period. Commodity agreements failed because the interests of the partners did not coincide. Outside producers disturbed the market. Even if it were possible to achieve a world oil agreement, would the participants be likely to stick to it? The lesson needed relearning that risks would remain as long as there was political instability. One issue to be examined by the IEA ministers was whether the strategic stocks should be strengthened, but of course that would cost money.

Mrs. Steeg said she had no difficulty with the subjects covered by the European Energy Charter because they were the same she had outlined. Opportunities had to be found to create a climate of common interest. But the Energy Charter must not be a closed shop. The Soviet Union, for example, had vast resources of oil and gas in Siberia, which was closer to Japan and the United States. The idea of the Charter was not a bad one and deserved further

examination. But regionalism must be avoided, with the Europeans embarking on an energy charter with the Soviet Union, the United States with Mexico, Venezuela and Canada, and Japan with the Pacific region.

Mrs. Steeg agreed with the trade union representative who said that energy and environmental policy should be more closely linked. She did not exclude a combination of regulation and taxes. It was necessary to work for an international agreement, but we were not there yet.

Where government responsibility lies

There could be no question of renouncing government policies, but rather the right division of labour. This could not be formulated "from here to eternity". There had to be flexibility. Governments had to provide framework conditions within which industrial sectors had security of operations and management. Certain areas such as public safety, the environment, and defence policy were solely the responsibility of governments.

Developing countries had to scramble for supplies and pay top prices for oil, one of the trade union experts stated. Should there not be a special IMF facility to provide them with financial support with their oil bills? A second question was whether the oil companies were happy with the IEA's recent performance. Finally, the problems facing Poland were raised. The country had half a million miners and 71 pits that could achieve quite a lot in terms of efficiency, management and conservation. In terms of environment and short-term cost analysis, they would have to close 30-40 pits over the next three or four years.

Mrs. Steeg said the Polish case showed very clearly that it was not possible to advise East European countries to apply OECD-type energy policies overnight. It was certainly not possible for the Polish energy sector to close as many pits as would be desirable to bring fewer subsidies into the Polish economy. These countries needed vast financial resources. Poland in particular had access to the IMF, the World Bank, the so-called G24 process, and the new European Bank for Reconstruction and Development. But how strongly can one recommend them to change? IEA officials who had studied the Polish energy economy as part of the Agency's review process were impressed by the courage with which they had increased prices.

The oil companies gave their advice on supply and demand during the Gulf crisis. By and large they behaved well by using stocks instead of hoarding them, so that government action was not necessary. No oil companies criticised the IEA, although there had been criticism, for example from the Algerian Oil Minister, Mr. Boussena, and from oil traders who had bought high and had to sell low.

ITEM II

Macroeconomic implications of changes in oil prices

Opening the session, Richard Herd, of the OECD's Economic Prospects Division, sketched the considerable structural changes experienced by the oil

economies of the OECD economies since the first oil shock in 1973. He noted that oil consumption as a percentage of GDP had dropped to 60 per cent of its level in 1973, and net imports of oil in volume terms fell to less than half of 1973 levels. By 1989, the share of net oil imports relative to GDP was lower than in 1973. The OECD entered the Kuwait crisis with its economy considerably less exposed to increases in oil prices than at any time in the previous two decades. A \$10 increase in oil prices would have much less effect on inflation and output than in the past. The OECD calculation was that such an increase would produce 0.75 to 1 per cent less output and about 1 per cent higher price inflation.

However, oil prices had fallen by about the same amount as last year's increase. The expectation was a fall in interest rates and a fall in inflation, and this was already being seen. There was not yet much effect on output, but stock market prices had picked up significantly. However, there were signs that the short-term economic outlook was worse than had been expected. The extent of the recession in the United States had been underestimated. In the United Kingdom, France and Italy, there was evidence of more weakening in the economy than expected six months ago. Only in Japan and Germany had output continued to grow relatively rapidly. Still the fall in oil prices had an offsetting effect, and had probably brought forward the increase in economic activity expected for 1992.

Oil price rise did not translate into wage increases

Mr. Herd was asked to characterise the response of wages to the oil price rise. He said it appeared that the increase in prices at the end of last year had not gone into increased wages. It had not started a new wage spiral. Moving into the spring, the level of inflation should be coming down. The perception in markets, evident as long ago as September, that the increase in oil prices would be only temporary, had served to dampen the economic effects.

Another questioner noted OECD projections of a \$50 oil price in real terms by 2005 and asked what the impact would be on other energy sources. Mr. Herd said the price effect on oil consumption was becoming less pronounced. Substitution away from oil, particularly in the electricity sector, was now less than it had been because the possibilities for switching had already been exploited. Further big movements away from oil seemed unlikely. An increasing share of oil in the transport sector was projected. Because of the large tax element in retail prices of gasoline, price rises in crude oil would not be fully reflected in prices at the pump, leaving consumption relatively unaffected. The existence of ample coal supplies limited the extent to which coal prices moved up and down as oil prices moved.

A great future for gas

Mr. Starling described gas as having a great future, readily available and environmentally attractive. The advent of small gas combined cycle plants that had low capital costs would help to make gas into a growth fuel. The scope for increased use of alternative energy sources was limited, at least over the next 10 years, Mr. Herd said. Further in the future new technologies might change that.

Mr. Herd was asked to explain why he believed that the lack of response in wage levels to higher oil prices was a positive development. He said higher oil prices certainly lowered real national income, and this translated into lower consumption. Purchasing power was transferred outside the OECD to countries supplying oil, while demand in the high street fell. He recalled that, in the 1973 oil price shock, prices were immediately transferred to wages. The initial increase in prices was multiplied several times, resulting in high inflation.

An expert from the trade union side observed that to suggest that oil price rises should not be passed on through wage increases raised questions about distributional effects that were of great concern to trade unionists. It would be the wrong political message to say problems were solved this time because of wage flexibility which permitted price fluctuations. "There is very limited room for public or trade union acceptance of some of those policies, particularly when there is a degree of unfairness involved." Factors included the amount of money going to Saudi Arabia, and the state of oil company profits. The trade union speaker also expressed concern about the impact on employment of lower energy prices, prompting industry to use more oil and less labour. Were there any options for a low oil consumption scenario coupled with high employment growth? Trade unions were concerned with getting an employment "tilt" to economic growth.

The difficulties of being fair

Mr. Herd said it was difficult to see how it was possible to introduce an element of fairness to deal with the distributional effects of oil price rises on the world economy. The countries that had benefited were the ones that had the oil and the only answer was to have policies that coped with price fluctuations. In contrast with the 1973 and 1979 crises, the markets for crude and refined products had handled the situation very well because they were now much more developed than in the past. One had to look at policies of non-interference with the market and improving market signals as much as possible.

Trade union speakers were evidently unconvinced by arguments from the OECD and the IEA about the impossibility of stabilizing prices. Over and over again, the debate returned to such issues as whether there was a fair price for oil. One trade union participant said he could not accept that an agreement linking oil producers and consumers was unattainable. Why should OPEC alone act as swing producer? The lessons of the past had to be learned. He spoke of the damage to investment plans and long-term structural adjustment of economies caused by fluctuating energy prices.

ITEM III

Relations with non-Member countries of the IEA

Quincey Lumsden, Director for Oil Market Developments at the IEA, said the uncertain outlook for oil markets at the beginning of the 1990s was the "sum and substance" of the IEA's desire to improve relations with non-member countries. The fundamental equation of energy was changing rapidly and would

change irrevocably some time in the present decade. The world outside the OECD, which had long been the main producing area of energy, would soon become the major consuming area as well. Another current phenomenon of great political force was concern over the state of the planet and energy's contribution to environmental difficulties.

Energy consumption shift to non-OECD countries

Half of the world's energy consumption was now taking place outside the OECD. In 1975 it was only 40 per cent. The IEA's Energy Outlook to the year 2005 indicated that energy demand in the non-OECD countries would grow much faster than in the industrialised world. The OECD share of world energy markets will shrink further and at an accelerating rate. To improve energy security, economic growth and environmental protection it was in the OECD nations interest to assist these countries in development and reconstruction of their energy systems. This would be no easy task. Great portions of the world were reaching economic take-off point and would like to emulate western living standards. "It would be difficult for us to tell them they cannot do so because we have gone before them and know that this sort of economic growth tends to dirty the planet and is therefore undesirable."

An energy charter for Europe?

On the proposed European Energy Charter, Mr. Lumsden said it was a new idea, and the IEA did not yet know what it involved. It was not even clear which countries would be included. But there was a danger that if the so-called Lubbers plan were not sufficiently broad in its constituency, it would stimulate counter-regional plans. They were already beginning to become evident. Energy spheres of influence were being discussed for the western hemisphere and another for Japan and the south-east Asian region plus Australia and New Zealand. Mr. Lumsden warned of the dangers of creating energy closed shops. Plans such as this tended to skew oil markets by encouraging any given region to exclude less expensive oil in favour of more expensive oil within the region. Consumers of oil would end up paying more than they needed to pay.

The producer-consumer dialogue was an old story, understandably reborn after the Gulf war. Mr. Lumsden said it was necessary to avoid a collision of economic philosophies, those who believed in a Bretton Woods for oil, and those who believed in totally free markets. Neither was possible. Political organisations were simply not quick enough to manage a market as huge as that for oil. But there was a "new atmosphere" after the war. "We must find the appropriate framework where the objectives of people who produce oil and those who consume it can be examined, where they can better exchange views about which way oil is headed, short of deceiving themselves into thinking they can make some form of treaty which will absolutely control the price of oil and the amount of it that is going to be produced by government or inter-government fiat."

"Antique" energy profiles in Eastern Europe

Asked to discuss the energy outlook in Eastern Europe, Mr. Lumsden said the energy profiles of the economies in transition were "rather antique". Poland would like to increase its use of crude oil by nearly 100 per cent this decade. This probably amounted only to a couple of hundred thousand bd of oil by the end of the decade, and had to be accepted if this economy was to start moving upwards. Goods and services would need to become more mobile, and this meant greater use of oil. So the old IEA principle of reducing dependence on oil had to be overlooked in the case of Poland. "The Poles will need more oil if they are going to live better and have an economy that works better." Coal may be environmentally bad and lignite even worse, but you could not just stop coal-mining overnight. It seemed improbable that coal miners in Poland would be thrown out of work very soon. Poland needed to keep on producing coal. The problems of Eastern Europe were special cases, requiring great flexibility, and the last thing they needed was the application of economic dogma.

Mr. Lumsden was asked what the effect on the oil market would be if the United Nations at the Rio conference in 1992 agreed on a freeze of carbon emissions. He said the result would be greater reliance on oil because the coal industry was the one that would be mainly affected. It remained to be seen, if such a resolution were passed, how close it would be possible to get to the desired target.

ITEM IV

Energy supply and demand policies, with special reference to environmental issues

Frank Neumann, Head of Country Studies in the IEA's Office for Long-Term Energy Development, described the shift in emphasis in energy policies towards environmental issues, and remarked that the Gulf crisis had provided a salutary reminder of the importance of energy security. A problem was that policies that were desirable for energy security reasons could have negative environmental effects, and vice versa.

Coal, for example, offered attractions for energy security because it was available in abundance at relatively low cost, but was less acceptable in environmental terms because of its high CO₂ emissions. Renewable energy sources offered environmental advantages, but with the present state of technology they were not fully competitive. Efficiency improvements helped to solve environmental security problems, but the potential for improvements could not be realised fast enough.

Mr. Neumann outlined shifts in the energy mix since 1979, with oil down from 50 per cent in 1979 to 42 per cent at the present time. Nuclear energy's contribution had about doubled over the period, and coal also had increased. In electricity generation, oil's share had been greatly reduced, and coal and nuclear power accounted for the substitution.

A gradual approach on coal subsidies

Coal production in the IEA had increased significantly and coal trade was 50 per cent higher in 1988 than in 1979. Explaining the IEA's calls for dismantling of subsidies to high-cost producers in Europe and impediments to trade like import quotas, Mr. Neumann said that the subject was clearly a sensitive one, particularly for a trade union audience. "We have always pointed out that the social and regional aspects of the adaptation of coal production must be adequately taken into account. Therefore the adaptation can only take place step by step and with due consideration of social concerns." The IEA never accepted statements by several Member countries that domestic coal production must be maintained for reasons of supply security. The IEA's view was that supply security was adequately guaranteed if any of the IEA Member countries were able to deliver coal in the necessary quantities.

Nuclear energy had now reached a share of 20 per cent in electricity production. But the decisions to invest had been taken a long time ago. Since the Chernobyl accident and intense discussions on safety risks, plans to introduce nuclear plant had slowed significantly. Few plants were currently under construction. Public resistance was growing and was slowing development. Discussion of the environmental merits of nuclear power had recently intensified with growing concern about climate change resulting from the burning of fossil fuels. However, "Euphoric expectations for a quick renaissance of nuclear power are not justified".

The share of gas had not significantly changed, but there was potential for shifts from other sources of energy to gas in electricity generation. New discoveries in Norway and Australia had improved the supply situation. New technical developments were opening up possibilities for gas use, in electricity generation and other sectors as well, including transport. The relative cleanliness of gas was an incentive to development. New large infrastructure investments would be needed to make more gas available to the market.

Scope for renewables limited

Despite enthusiasm about renewable sources in environmental and other groups, the contribution to OECD energy supplies was only 7 per cent, and there was little hope this share would increase in the next decade. Most of this percentage came from hydropower. The potential for hydropower was already largely exploited in the OECD, and there was also considerable opposition for environmental reasons to further growth. Other renewable sources were economic only in specific locations and under special conditions. "At the present stage of development, investment decisions cannot be based on the assumption that renewables will be available in sufficient quantities in the near future."

On the demand side, Mr. Neumann noted that energy requirements in the OECD were growing more slowly than economic growth. This was the result of greater efficiency in the use of energy. There was undoubtedly greater potential for improvements in energy efficiency going beyond IEA assumptions for an improvement in energy intensity of 1.3 per cent per year.

Four basic truths

Paul Stolpman, Head of OECD's Pollution Control Division, said OECD studies on the relationship between energy and the environment over the past five years had led to the discovery of four basic truths:

1. Global energy demand is expected to continue to grow rapidly, leading to similar growth in CO₂ and other greenhouse gas emissions unless environmental policies are put in place capable of thwarting that growth in emissions.
2. Energy prices play only a moderate role in slowing energy demand growth and the resulting growth in emissions. Significant reductions in emissions would require extremely large increases in energy prices that would probably be politically unacceptable. Even a 50 per cent increase in the price of oil would not produce significant reductions in energy demand, and hence in emissions. However, price increases through fees or taxes could be used productively to fund priority needs like the funding of energy technology development, transfer of technology to non-OECD countries, energy conservation and efficiency improvements.
3. Environmental problems associated with energy consumption will increasingly be caused by non-OECD countries. Global environmental problems will therefore have to be dealt with through co-operation between OECD and non-OECD countries.
4. In some sectors of regions, substantial emission reductions can be achieved through use of advanced technologies. However, even over the medium term of 15 to 30 years, energy conservation, improved energy efficiency and ever more stringent emission control technologies will all be needed to maintain near term gains in environmental conditions.

So how do you solve the emissions problem?

In the ensuing discussion, a British trade union expert pointed out that for all the talk about the effectiveness of the market mechanism, it was now being said that price elasticities were such that higher prices would have no effect on consumption. How was the problem of reducing emissions to be solved therefore?

Mr. Stolpman said he was convinced that regulatory and market solutions would have to complement each other. The price mechanism would eventually work in deterring consumption, but the question was at what cost if significant reductions in emissions were to be achieved? Discussing how energy goals could be reconciled with environmental goals, Mr. Stolpman said the answer was to lay out environmental needs very clearly from a scientific perspective. "If you can determine what your ambient air concentrations or your water quality standards should be to have a healthy environment, then your energy policy-makers know they have a target."

Trade union representatives had doubts about the effectiveness of sole reliance on the market in bringing about environmental improvements in energy use and consumption, pointing out that for commercial reasons investment was concentrated in areas offering short-term rather than longer-term returns. But the energy sector was one whose development required long-term investment.

One of the trade union experts argued that taxation alone was an inadequate instrument to achieve environmental goals, and noted that because of the prevailing economic philosophy among OECD countries imposition of standards was no longer being discussed. He urged a new approach to the environmental problems of developing countries and the economies in transition in Eastern Europe. These countries could not cope with their environmental problems and if the industrial countries insisted on being stingy, behaving towards them like bankers imposing austerity, then nothing would be achieved. He said the Swedish government was investing in anti-pollution measures in Poland because it was cheaper to invest there to bring about environmental improvements than to invest in Sweden itself where standards were already high.

Mr. Neumann said there was agreement on both sides that a combination of methods was needed to get results. This could include standards, taxes and other instruments. In Germany, negotiations had succeeded between the government and appliance manufacturers on reducing pollution from their products. There was no clear view among IEA countries about the best approach. The United States had based its policy on imposing standards. Some European countries decided to rely more on economic instruments like taxes to influence the behaviour of the population.

Mr. Neumann acknowledged that investment decisions were being made on a shortening time horizon. This was true of electricity generating facilities for example. Producers were hesitating to embark on large-scale investment programmes stretching into the distant future. They looked instead for solutions requiring short lead times, such as gas generating facilities in the United States. On the example of Swedish anti-pollution investment in Poland, Mr. Neumann said it was true that every dollar spent on environmental improvement in developing countries or former centrally planned economies produced bigger improvements than the same amount spent in OECD countries. It was important to create a framework making this type of investment in developing countries possible.

The need for public debate

Taking up a question on public participation in environmental decisions raised on the trade union side, Mr. Stolpman said OECD countries needed public debate on environmental goals in order to bring the public into the system, so that standards can be understood and set. If the public understood benefits and disadvantages of environmental standards, this would provide an anchor for environmental policy.

ITEM V

The future of energy technology and the implications for employment

Evolution of energy markets had to be seen as the background against which energy research developments would take place, Mr. John Brady, of the IEA Energy, Technology and Research and Development Office said. Mr. Brady started his presentation by outlining some of the IEA's energy technology policy goals -- reduced dependence on oil, greater efficiency, conservation, environmental improvements. There was a difficulty in balancing environmental concerns with energy security objectives. Referring to the World Energy Outlook drafted by the IEA, Mr. Brady said that after 1985, when oil and other energy prices fell, the incentive to improve efficiency in oil use, described as "oil intensity", was dissipated. The trend towards a deterioration in oil intensity stabilized after 1987, but there were no improvements. This had important energy security implications.

The IEA was critically interested in the rate of entry of new technology into the market place because that would dictate both the range of technology acquisition by different industries, and therefore the overall efficiency of the industry, as well as the rate of energy intensity improvements throughout the economy. One major issue was the incremental as opposed to the innovative aspect of the introduction of new technologies. Experience since 1973 showed that it was much simpler to make small improvements in an existing technology than to bring in a totally new technology. It was for example relatively easy to bring gas consumption turbines to a point where they gained a major share of electricity production markets, rather than to introduce a totally new electricity production technology, like integrated coal gasification combined cycle or fuel cells for power generation. Introduction of a high efficiency gasoline engine was also relatively easy, because it used an existing infrastructure, but it would be much harder to introduce a vehicle consuming a brand new fuel. The industrialised world was likely to see a much slower rate of new technology introduction compared with the rate at which existing technologies were improved.

Competition and regulatory framework

The strongest incentive to the introduction of a new technology was market pull. Competition in the market place ensured that the rate at which new technologies are adopted is the optimal rate. If competition was limited, then technology introduction would suffer. Examples were when prices were manipulated or distorted. The regulatory framework had a profound impact on the rate at which new technologies were introduced. The classic examples were in the gas and electricity utility sectors where monopolies had a negative effect on innovation.

Mr. Brady described the extremely meagre share of renewable energy technologies apart from hydropower in electricity generation in the OECD countries. He said that, including hydropower, they contributed 18 to 20 per cent to electricity generation. But of that amount, 95 per cent was accounted for by hydropower. This situation was unlikely to change at least up to the first decade of the next century. This lack of penetration was despite the engineering capability of many of the renewable technologies.

Falling energy prices discouraged government R&D spending

National R&D spending by governments peaked between 1979 and 1982 and fell off thereafter. This indicated shifting emphasis in government spending priorities as energy prices fell. The downward trend also demonstrated a shift in government perceptions towards the belief that the market should be the source of new technology development and its commercialisation. Governments were inclined to focus more on fundamental technology development. Therefore government spending was concentrated in the nuclear area, fusion technology and fast breeder reactors for example, while government had withdrawn from many other sectors. Although national government-funded R&D programmes had contracted, international collaboration had improved, stimulated by the advantages of avoiding duplication of effort.

Looking at the outlook for R&D, Mr. Brady identified technologies which would have a profound impact over the next 10 to 15 years. They were:

{Supply side}

- * Enhancement of oil and gas recovery techniques. The vast amount of capital investment already made in infrastructure meant that incremental improvements would be more cost effective than any other development.
- * Clean coal technology. Here too there was an existing infrastructure, as well as a clear need to solve environmental problems.
- * Gas systems. Gas was a versatile fuel, although the problem of getting it to the point where it could be used should not be underestimated. It would remain a heavy claimant on investment.
- * Nuclear fuel cycle developments. They already attracted such a large portion of government R&D funds that terminating programmes would be politically difficult.
- * New and renewable fuel sources would continue to be the poor cousin of other investment areas because their penetration rate so far had not matched up to expectations and was unlikely to do so over the next several years.
- * New abatement techniques for both conventional pollutions and greenhouse gases (zero waste systems).

{Demand side}

- * Demand management technologies for utilities like gas and electricity.
- * New materials research. This means making materials and products less energy intensive.

- * New fuels and propulsion systems. This was at the heart of the biggest single problem of energy security facing IEA countries. Transport use of liquid fuels had remained entirely resilient since 1973, although it had been possible to cut back on fuel use in every other sector.
- * Co-generation, district heating and space conditioning. These were important because they offered employment opportunities.

ITEM VI

The energy outlook and the effects of CO2 abatement measures (energy and macroeconomic effects)

The IEA cannot foresee the future. It could only produce analysis based on plausible scenarios for price developments. Nicolaos Kouvaritakis, of the IEA's Economic Analysis Department, made this clear at the outset of his presentation.

Starting with an examination of the outlook for Middle East oil, Mr. Kouvaritakis noted that the area contained two thirds of the world's oil and had recently provided about one quarter of world oil supply. Prospects were that Middle East output would pick up steadily up to around 1995. This could be easily achieved for there was ample spare capacity. Beyond that, new capacity would have to be developed to meet growing demand for Middle East oil. Since Middle East oil was the least costly, this should pose no problem. But the question had to be asked whether this expanded production would take place just to keep prices low. If this did happen, then demand for the region's oil would increase exponentially. Even though OECD oil demand was expected to grow only slowly, the region's import dependence would become greater because its own oil production was over its peak. The extent of import dependence would depend on price developments, with dependence higher on a low price scenario.

Turning to the impact of carbon taxes, Mr. Kouvaritakis described a hypothetical exercise carried out by the IEA based on three different levels of tax -- taxes of \$65, \$130 and \$550 per tonne of carbon produced throughout the OECD. All were extremely high taxes. Even the \$65 tax amounted to an \$8 increase per barrel in the price of oil and a near doubling of the price of coal, but it would not be enough to harness the growth in carbon emissions. The \$130 tax would stabilize emissions up to the year 2000, but thereafter they would start to creep up again. The extreme case of a \$550 tax -- which Mr. Kouvaritakis described as "totally absurd" -- was the only one capable of bringing about a marked reduction in emissions up to the year 2000. Ominously, the impact got smaller as the taxes increased, so there was an effect of diminishing returns.

A meagre result for big measures

Looking at the \$65 tax example, Mr. Kouvaritakis said that for the OECD it reduced energy consumption by 5.2 per cent, while the \$130 tax produced a drop of 9.1 per cent. On a worldwide basis, and because of the growing importance of the non-OECD regions in energy consumption, the reductions were

2.2 per cent and 3.9 per cent respectively. CO2 emissions were reduced by 7.5 per cent through the \$65 tax, which was 2.9 per cent for the world as a whole. Even the \$130 tax produced a drop in worldwide emissions of only 5 per cent. "It is a rather meagre result for rather big measures", Mr. Kouvaritakis said.

Andrew Dean, Head of the Public Economics Division in the OECD's Economics and Statistics Department, described the various strands of the Department's work on assessing the costs of slowing climate change; a survey of existing models, a modelling exercise comparing some standardized results from five global models and an in-house multi-sector, multi-region general equilibrium model (GREEN) for use in examining the role of carbon taxes and different international agreements. There were various messages from this work:

- * If CO2 emissions were to be limited, it would not be enough for OECD countries to act alone.
- * A long time horizon is needed to assess costs and benefits (damage avoided) properly, since the latter will happen much later.
- * Uniform percentage reductions in each country are not efficient. It would be better, for instance, to concentrate cuts in the more polluting countries such as those of Eastern Europe.
- * There would be structural changes away from energy-intensive industries.
- * Among the energy industries, coal would be the hardest hit.
- * Overall employment consequences over the longer term would be limited, (long-term models assume flexibility of factors), though there would be important sectoral effects and adjustment costs.

Mr. Dean said that in discussing taxation and other remedies to climate change, the principle had to be applied that costs were only justified if the resulting benefits were worthwhile. Costs could be calculated, and there was no shortage of figures, but it was hard to quantify the benefits of slowing climate change, like the damage avoided from rising sea levels or changes in conditions for agricultural production.

Trade union contributions to the ensuing discussion disclosed some disappointment that there had been no in-depth examination of the employment implications of taxation or other measures to reduce carbon emissions. There was considerable uneasiness about the structural implications, for example in the coal industry which would be particularly badly hit by carbon taxes heavy enough to produce significant reductions in emissions. One speaker said governments would have to develop labour market measures to handle structural changes in a fair and efficient way and in order to avoid unemployment. The effect on living standards would not be uniform, and low income groups were disproportionately affected by energy and carbon taxes. It was all very well to talk of the mobility of labour, but the mining industry in OECD countries still employed 600 000 people. It was difficult to see how these people could

easily shift into some other industry. It would also be difficult for them to accept that carbon taxes should be introduced only in the OECD.

There were expressions of dismay at the negligible global effect on carbon emissions of the tax levels discussed by Mr. Kouvaritakis and Mr. Dean. One speaker said: "After hearing the linkage between the tax figures and the emission reductions that would result, anybody in his right mind would abandon the idea of a carbon tax". Trade unionists were also concerned at the risk that the wrong long-term decisions might be made, destroying communities and livelihoods to no good purpose. How could the imbalance created by excessive attention to short-term price changes be corrected? A preoccupation that recurred in several interventions was that by accepting strict environmental standards that were not matched by the rest of the world, the OECD countries risked putting themselves at a competitive disadvantage. It was however accepted that potential benefits and potential job-creating effects had to be included in the picture when making judgements.

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{A brief final impression}

Presentations by the OECD and the IEA over two days of discussions on the major energy issues of our time inevitably produced a market-oriented view of the world, and a justification for policies followed during the Gulf war and those which seem likely to be pursued in the years immediately ahead. The session with the trade union experts under the Labour/Management Programme consisted of a series of prepared briefings by experts in oil markets, producer-consumer relations, oil supply emergency systems, long-term energy planning, R&D, economic analysis and the environment. The trade union participants made their views known through spontaneous interventions, and by the thrust of their questions. For both sides, it was an opportunity to clarify thinking and to discover each others' views.

Employment aspects neglected

The debate disclosed considerable disappointment on the trade union side that the scheduled speakers were able to offer little in the way of assessments of the impact on employment either of the oil price fluctuations occasioned by the Gulf war, or of the economic or regulatory measures under discussion in the energy sector for coping with the problem of climate change.

IEA speakers on the first day devoted considerable attention to describing the motivation for the Agency's decision to offer 2.5 million barrels of oil per day to the market on the first day of the war. It was not an attempt to influence prices, but rather to send a signal of reassurance to the market that IEA governments had the will and the means to make up for any supply disruption that might occur. In the event, the market was kept well supplied with oil throughout the crisis, and price fluctuations were the result of war fears rather than any imbalance in supply and demand.

The second major theme of the conference was the environment, and how economic instruments or regulation might be used to reduce environmental damage

from the production, transport and consumption of energy. The words "gloomy" and "sombre" were used by trade unionists in their reactions to the presentations. On the key issue of reducing carbon emissions caused by the burning of fossil fuels the conclusion seemed inescapable that the most stringent tax measures would be likely to produce only meagre results. While it was acknowledged that costs were much easier to assess than the benefits to be derived from preserving the earth's climate, there was a mood close to dismay around the table about the implications for jobs and living standards of the counter-measures outlined in various scenarios. It was suggested that the OECD should carry out surveys of job-creating potential of environmental measures.

The limitations of market mechanisms

After hearing IEA views about the effectiveness of the market in balancing supply and demand during the Gulf crisis, trade union speakers reacted by questioning whether the market could always be relied upon to send the right signals. They were particularly concerned at evidence -- referred to in several of the presentations -- that long-term energy investments essential to the solution of chronic security and environmental problems were being neglected in favour of short-term solutions driven by unsustainably low oil prices. There was also uneasiness about the pace of deregulation and the danger that safety standards in deregulated energy industries might be neglected.

Here are a few of the specific areas either of disagreement or difference of emphasis as they emerged from the discussions.

Producer-consumer dialogue: While accepting that the end of the Gulf war offered a window of opportunity for contacts between oil producers and consumers, the IEA left no doubt that it opposed a dialogue directed at stabilizing prices or demand. Trade union representatives were unconvinced by the IEA's opposition to commodity agreements and believed that arrangements to stabilize prices would be of great economic benefit. They also believed that the "buffer stock" idea should receive more careful examination.

Impacts of oil price rises on labour markets: When the meeting was told that there was no pass through on to wage costs from oil prices rises during the Gulf crisis, OECD experts welcomed this because it avoided an inflationary spiral. Trade unionists wanted to know where the money went. The answer was that the oil producers were the beneficiaries because they had the oil. The trade union side made clear that this was an unpalatable message, and they regarded the unfairness involved as deplorable.

- Long-term planning: While both sides acknowledged the impossibility of making accurate forecasts and basing policies rigidly upon them, the trade union representatives clearly believed that long-term energy policy should not be neglected in favour of oil and market-driven short-term reactions. They would like to see greater attention paid to social and employment concerns in the formulation of both energy and environmental policies even if this meant a greater state role.

The environmental challenge: There was a strong reluctance to see the poorest populations of the OECD countries bear the brunt of the economic sacrifices associated with cleaning up the environment and curbing use of fossil fuels. OECD speakers agreed that avoidance of competitive distortions was essential and that to be successful environmental policies had to be globally applied. Combinations of different policy measures could yield the best results. In all cases, public participation in policy discussion would increase effectiveness.

Aid to the non-OECD countries: The trade union side favoured flexible, innovative and widely-based policies towards developing countries and the East European economies in transition in the transfer of technology and assistance in meeting environmental standards. There was general agreement that the East European countries needed flexible assistance with their energy programmes, not dogmatic edicts.

ANNEX

LIST OF PARTICIPANTS

Trade Union Experts

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BOREUX•• Member of the Research Service•• "
Didier•• Confederation of Christian Trade Unions
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SORIA•• General Workers' Union (UGT-E)••SPAIN
Mrs. Sonsoles

BARTON•• Representative, European Office••UNITED STATES
Paul•• American Federation of Labor-Congress
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MORIN•• Deputy, Economic Department••FRANCE
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ROLAND•• Assistant to the General Secretary
Damien•• Miners International Federation

HUMPHRIES• Assistant General Secretary
Colin•• Public Services International (PSI)

Trade Union Advisory Committee to the OECD (TUAC)

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John•• Chairman of the meeting

McCLELLAND• Assistant to the General Secretary
Stephen••

RAPPORTEUR

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OECD/IEA Secretariat

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STEEG•• Executive Director of the Agency
Mrs. Helga•

LUMSDEN•• Director of Office N III on Oil Market Development
George Quincey•

••

BRADY•• Head of Division N 2 Energy R&D and Collaborative Projects,
John•• Office N IV, Energy Technology and Research and Development

••

HUGGINS•• Head of Division N 2 Emergency Planning and Preparation,
Peter•• Office N I Information and Emergency Systems Operations

NEUMANN•• Head of Division N 3 Country Studies, Office N II on
Frank•• Long-term Co-operation and Policy Analysis

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Andrew••

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Richard••

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Environment Directorate

STOLPMAN• Head of the Pollution Control Division
Paul••

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Mrs. Hélène•

Directorate for Science, Technologie and Industry

AUBERT•• Principal Administrator, Science and Technology Policy
Jean-Eric• Division

External Relations Division

LAHNER•• Deputy to the Head of Division
Herbert••

CHAS•• Assistant
Mrs. Rosemary

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END-OF-TEXT