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**REMARKS BY ROBERT PRIDDLE, EXECUTIVE DIRECTOR  
INTERNATIONAL ENERGY AGENCY  
PARIS, FRANCE**

**TO THE FIRST MEETING OF THE CONFERENCE OF THE  
PARTIES  
OF THE U.N. FRAMEWORK CONVENTION ON CLIMATE  
CHANGE  
(COP-1)**

**30TH MARCH 1995**

**BERLIN, GERMANY**

I am very honoured to speak here in Berlin, as my predecessor did on behalf of the IEA at the UNCED meeting in Rio in 1992. Because of the critical, indeed overwhelming, importance of the Framework Convention on Climate Change to how the world produces, transforms and consumes energy, this conference is high on the priorities of the IEA. At the IEA we recognise that the Climate Convention is, in many ways, an energy convention, a challenge to energy efficiency.

All of us here today can take satisfaction from what has been done in advance of this first meeting of the Conference of the Parties to the Convention; but I think we all recognise as well that this is but a first step in a groundbreaking, global endeavour. A lot of difficult work remains to be done.

The International Energy Agency is the forum in which industrialised countries come together to co-operate on energy policy. This co-operation fully embraces the environmental impacts of energy use and extends to all the participants in global energy markets. When IEA Ministers at their last formal meeting adopted a new statement of their shared energy policy goals, the environment figured prominently in the preamble and directly in six of the nine stated policy objectives. [See copy of IEA "Shared Goals" attached.]

What this means is that energy ministers have no doubt that the environmental dimension of energy is inextricably woven

into the decisions which must be made by governments to set the proper framework conditions for the adequate and efficient supply and consumption of energy.

The analysis that has been done by the IEA and others in the run-up to Berlin highlights this reality. Indeed, it is the reconciliation of energy and environment goals, and the inherent trade-offs which must be resolved in that reconciliation, which are at the heart of the matter for all of us here in Berlin.

There is no better illustration of the inextricable link between energy and the environment than the fact that over 90 percent of anthropogenic CO<sub>2</sub> emissions reported in the FCCC Secretariat's synthesis of the first national communications from Annex I Parties under the Convention were attributable to energy as a result of fuel combustion.

The IEA's World Energy Outlook presents projections of future CO<sub>2</sub> emissions to 2010 under a set of assumptions about economic and population growth, energy prices and other factors, including an assumption that no new policies beyond those in place at the time the IEA Outlook is prepared are factored into these projections.

The most critical assumption is global economic growth. Our Outlook expects it to continue. We believe no other assumption on this point is acceptable. The trouble is that economic growth means energy demand growth. That, on the

basis of current policies, means carbon emissions growth.

According to IEA data, world carbon emissions (excluding FSU/CEE where reliable data are not available for the whole period) grew by 2.1 per cent per annum from 1971 to 1992. Over the same period, world energy use grew by 2.5 per cent per annum, implying an average annual improvement in carbon intensity per unit of energy of about 0.4 per cent.

This improvement in the relative growth rates of CO<sub>2</sub> emissions and energy consumption in the OECD from 1971 to 1992 is attributable to the substantial growth in nuclear power over that period. Over our future Outlook period, nuclear power is expected to grow only slightly and its share in the fuel mix to decrease. The implication is that the evolution of CO<sub>2</sub> emissions will follow energy demand growth much more closely than in the past. Can this really be sustained?

Global energy-related CO<sub>2</sub> emissions in 2010 are projected in our latest Outlook to grow from between 30 to 40 per cent over their 1990 level, depending on the assumptions used. More than half of the increase in these emissions is expected to occur outside the OECD, where CO<sub>2</sub> emissions are projected to more than double. In the OECD countries, CO<sub>2</sub> emissions are projected in our new Outlook to exceed 1990 levels in 2010 by anywhere from at least 11 to almost 24 per cent depending on the assumptions made.



In fact, under all of the ranges for alternative economic growth, energy price and efficiency assumptions in our Outlook, emissions are projected to increase substantially, but to different degrees, compared with their 1990 levels in every region except the FSU/CEE, where emissions levels in 2010 are lower than 1990.

The major reason for the disproportionate growth in the non-OECD share of CO<sub>2</sub> emissions in our World Energy Outlook is the much faster demand growth in these countries, which is more than three times the growth rate in the OECD, as well as the higher carbon intensity per unit of GDP in these countries compared to OECD.

If population is taken into account, however, our Outlook points out that the OECD emits nearly seven times as much carbon per capita as the countries in the rest of the world. This ratio is projected to fall in our Outlook to between four and five over the Outlook period, which nevertheless represents a continuing disparity in emissions between the OECD and the rest of the world on a per capita basis.

So, the primary message of the range of projections in the IEA's World Energy Outlook is stark. In its simplest terms, the IEA Outlook confirms that the world's economy is highly geared to the use of fossil fuels. Decoupling economic growth from such intensive fossil fuel dependency, and so from rising CO<sub>2</sub> emissions, is a formidable challenge, but one that must be faced.

A reversal in the CO<sub>2</sub> emissions trend described in our report depends upon either unforeseen economic events (e.g., a major recession) or adoption of effective policy actions beyond those already adopted to reduce emissions growth.

It is clear what we must do. We must break the link between economic growth and energy demand growth which leads to the inexorable rise in greenhouse gas emissions. To do this, there must be a two-fold attack: on the energy intensity of our economies, and, on the carbon intensity of our energy mix.

IEA Ministers have accepted this challenge. They take the view that there should be a mix of policies to address global climate change according to the economic and national circumstances of each country; but that all policy instruments and all energy sources should be on the table for consideration.

IEA countries know they must deliver first on their own commitments. But we also seek to reach out to build bridges with non-OECD countries in order to improve co-operation and make available the fruits of our own experience. Despite the disparities which exist among historical, current and projected emissions patterns in the various regions, all of us know that addressing the emissions in only one region will not be sufficient in the long run to overcome the growth in global emissions.

We all need to understand and compare each other's policy

responses. The IEA places high priority on helping to track and analyse these policy responses, promoting transparency and assisting in the development of methodologies for assessing the comparability of effects of measures proposed or adopted. This is not accounting for accountings's sake: it is ensuring that objective information on the most effective and economically efficient approaches is available and used.

We all know what is necessary to reverse the trend of increasing emissions. Countries need policies which result in increased efficiency in fossil fuel technology, increased reliance on non-fossil sources of energy and, above all, greatly accelerated improvement in energy end-use efficiency.

A number of specific priorities for accelerated work have emerged. These include enhanced technology development and collaboration; pursuing the possibilities for joint implementation in the energy sector that would benefit all countries; and voluntary approaches, involving the willing commitment of the private sector to reduce emissions in the most cost-effective manner.

These and other greenhouse gas emissions reduction measures need free and open markets in which to operate, with no new restrictions to trade erected in the name of the environment. The role for governments includes, among other things, the removal of barriers and distortions, review of subsidies and incentives, and promoting full cost pricing.

Technology will play a decisive role, whatever the political and economic framework created by Governments. A critical first step will be the more widespread application of currently available cleaner technologies in all sectors of the economy. For example, the efficiency of coal combustion could be almost doubled in many countries through the application of proven, available technology. In the case of natural gas, there are many available technologies which achieve high efficiency in natural gas combustion. In the niche markets many renewable energy technologies are also now well proven for commercial application, particularly in remote locations. In the case of solar energy, this is true in both temperate and tropical locations.

Action to deploy existing technologies and to develop new and improved ones need not and should not be seen as the sole preserve of developed countries. Nor should it be seen solely as a government responsibility. Governments have a clear responsibility to provide the framework for sustainable economic development, but many of the decisions to apply specific technologies will in fact be taken by industry or by individuals in their own daily activities. These decisions can support local economic growth and contribute to more local environmental improvements, for example in relation to air and water quality.

For its part, the IEA will focus its contribution not only on further analysis and effort in support of the FCCC process, but also on technology collaboration, voluntary programmes,

improvement of energy efficiency standards, actions to remove barriers to policy effectiveness and technology application, enhanced awareness and information dissemination through projects such as GREENTIE, and joint implementation.

I can assure you that the IEA will remain active as a contributor to the implementation of this Convention from the energy perspective. We will continue to promote the free exchange of information and expertise; we will continue to help to inform the debate through our conduct of analysis and our sponsorship of fora for discussion; we will continue to promote technology collaboration; and, we will assist with communicating, reviewing and evaluating energy aspects of information in the FCCC context.

Meanwhile, the core of our work at the International Energy Agency will remain the review, debate and enhancement of national energy policies. As I have outlined to you in my remarks today, these core IEA activities fully embrace the environmental dimension of energy supply, transformation and use. Were they not to do so, I believe security of energy supply (the original motivation behind the creation of the Agency) and the economic growth which depends on it would both be put at risk.

The success of future energy policy, while continuing to be assessed in traditional terms of market efficiency, economic growth and diversity of supply, will also be judged on the extent

to which it contributes to resolving global environmental problems. If energy policy were seen to exacerbate, rather than ameliorate, these global environmental problems, then that, in its turn, would prove to be unsustainable.

The basic message regarding the energy dimension of this problem has not changed since Rio. The establishment of free and open markets is a fundamental point of departure; however, market forces alone do not provide energy security or a clean environment. There is a clear role for governments to set the right framework conditions. Energy prices should not be held artificially below the costs of supply to promote social or industrial goals and, to the extent practicable, the environmental costs of energy production and use should be reflected in prices.

Creating the right policy environment and setting the appropriate conditions for improved energy efficiency and increased use of cleaner fuels is the preferred course for governments to follow. Consumers and producers armed with information and the ability to act on that information can be a powerful instrument of change and economic vitality.

None of us underestimate the importance or the urgency of what we seek to accomplish here in Berlin. The message contained in the IEA's latest World Energy Outlook to 2010 does not suggest that we can hold our breath and hope something will turn up to save us from hard choices.



The end of the Cold War, the momentum of Rio and a whole series of new co-operative actions among members of the international community create the conditions for joint action - action to reconcile our production and use of energy with protection of our global environment. The longer we wait to confront this challenge together, the harder it will be.



# INTERNATIONAL ENERGY AGENCY

## "SHARED GOALS"

The 23 Member countries\* of the International Energy Agency (IEA) seek to create the conditions in which the energy sectors of their economies can make the fullest possible contribution to sustainable economic development and the well-being of their people and of the environment. In formulating energy policies, the establishment of free and open markets is a fundamental point of departure, though energy security and environmental protection need to be given particular emphasis by governments. IEA countries recognise the significance of increasing global interdependence in energy. They therefore seek to promote the effective operation of international energy markets and encourage dialogue with all participants.

In order to secure their objectives they therefore aim to create a policy framework consistent with the following goals:

**1 Diversity, efficiency and flexibility within the energy sector** are basic conditions for longer-term energy security: the fuels used within and across sectors and the sources of those fuels should be as diverse as practicable. Non-fossil fuels, particularly nuclear and hydro power, make a substantial contribution to the energy supply diversity of IEA countries as a group.

**2 Energy systems should have the ability to respond promptly and flexibly to energy emergencies.** In some cases this requires collective mechanisms and action: IEA countries co-operate through the Agency in responding jointly to oil supply emergencies.

**3 The environmentally sustainable provision and use of energy** is central to the achievement of these shared goals. Decision-makers should seek to minimise the adverse environmental impacts of energy activities, just as environmental decisions should take account of the energy consequences. Government interventions should where practicable have regard to the Polluter Pays Principle.

**4 More environmentally acceptable energy sources** need to be encouraged and developed. Clean and efficient use of fossil fuels is essential. The development of economic non-fossil sources is also a priority. A number of IEA members wish to retain and improve the nuclear option for the future, at the highest available safety standards, because nuclear energy does not emit carbon dioxide. Renewable sources will also have an increasingly important contribution to make.

**5 Improved energy efficiency** can promote both environmental protection and energy security in a cost-effective manner. There are significant opportunities for greater energy efficiency at all stages of the energy cycle from production to consumption. Strong efforts by Governments and all energy users are needed to realise these opportunities.

**6 Continued research, development and market deployment of new and improved energy technologies** make a critical contribution to achieving the objectives outlined above. Energy technology policies should complement broader energy policies. International co-operation in the development and dissemination of energy technologies, including industry participation and co-operation with non-Member countries, should be encouraged.

**7 Undistorted energy prices enable markets** to work efficiently. Energy prices should not be held artificially below the costs of supply to promote social or industrial goals. To the extent necessary and practicable, the environmental costs of energy production and use should be reflected in prices.

**8 Free and open trade** and a secure framework for investment contribute to efficient energy markets and energy security. Distortions to energy trade and investment should be avoided.

**9 Co-operation among all energy market participants** helps to improve information and understanding, and encourage the development of efficient, environmentally acceptable and flexible energy systems and markets worldwide. These are needed to help promote the investment, trade and confidence necessary to achieve global energy security and environmental objectives.

The "Shared Goals" were adopted by IEA Ministers at their 4 June 1993 meeting in Paris.)

\* Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Japan, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, United Kingdom, United States.