

① The lean-burn engine is far better than 3-way catalytic. We have it. Why can we not retrograde Prime Minister then for refusing to adopt it.



May I have a word with Nick Ridley tomorrow?  
Prime Minister

Content with the proposed approach, subject to the views of colleagues?

NOx PROTOCOL AND DECLARATION

On 1 November, in Sofia, Malcolm Caithness will agree and sign the NOx Protocol to the UN-ECE Convention on Long-Range Transboundary Air Pollution. The Protocol will commit us to reducing NOx emissions back to the levels of 1987 by 1994 and by 1996 to have adopted policies based on the "Critical Loads" which the environment can tolerate. It is a milestone because it carries wide support in both East and West Europe, and because it marks an international acceptance of the scientific approach we have all along advocated. Our recent decisions on low-NOx burners for power stations and on car emission standards enable us to accept the 1994 commitment.

I agree - but a real good attack on the Prime Minister would be to say that the world would be better off without him.

The signing should be very good news for us, but a few countries have decided to sign a Declaration (at Annex A) committing them to achieving a 30% reduction in NOx by 1998. Annex B explains why they are able to do so; there is no prospect of preventing or amending the Declaration. It will be signed on the eve of the Protocol in order to upstage it. We rightly scorn arbitrary percentage targets, but the "30% Club" for sulphur emissions has shown the powerful grip they can take on the public imagination.

On present policies we could commit ourselves only to about a 10% reduction by 1998. My officials estimate that to get 30% we would have to commit ourselves to 3-way catalysts on all cars, to a second-generation of low-NOx burners on existing power stations and to selective catalytic reduction technology on new power stations. Annex C goes into this in more detail; we could not, however, rush into such a package even if we decided it was desirable. We have a longstanding and public aim of policy to reduce NOx emissions measured against 1980 by 30% by the end of the 1990s. The success of our economic policies would now make it unlikely that we would achieve this aim which was set when the

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economic outlook was much less favourable. It remains a possibility on certain low-growth scenarios, however, and it would be extremely damaging to our overall environmental stance to abandon it at this moment. Rather, I suggest that we explain that the substance of the declaration has long been our aim but that we do not enter binding commitments on the basis of aims, but of deliverable policies.

*Also point out what we are about.*  
- And from more nuclear.

I attach at Annex D the essence of the line. I propose to emphasise the importance of UK action and of the Protocol and to play down the Declaration. We can deploy part of the message when we reply to the Swiss invitation to sign the Declaration, and part when Malcolm makes his speech to the Executive Body of the Convention before the signing of the Protocol. Malcolm can also write to the Bulgarian Chairman. These messages can be released to the press, and we will arrange careful press briefings - all timed to avoid allowing the Declaration countries and environmental groups to work-up a counter-attack.

We have considered the option of making an alternative Declaration. The Belgians are expected to make a statement in support of the Declaration saying that Belgium will make every effort to reduce NOx emissions and to achieve more than allowed for by the Protocol. We could associate ourselves with this and the Norwegians and some others could probably be persuaded to do so. We would, however, be placing ourselves in a second tier of states and we would blunt our attack on the whole structure of the Declaration. I do not favour this course though we may be left looking rather negative as a consequence.

I am copying this letter to Geoffrey Howe, Cecil Parkinson, Paul Channon, David Young, Nigel Lawson and to Sir Robin Butler. I would be grateful to know quickly if you and other colleagues agree with the general approach I have outlined.

N R

14 October 1988



25th August 1988

D R A F T   D E C L A R A T I O N  
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## on the 30 Percent Reduction of Nitrogen Oxide Emissions

The Governments of Austria, Denmark, the Federal Republic of Germany, Liechtenstein, the Netherlands, Sweden, Switzerland (....), who will sign the Protocol to the 1979 Convention on Long-Range Transboundary Air Pollution concerning the Control of Emissions of Nitrogen Oxides or their Transboundary Fluxes (hereafter referred to as "the Protocol"),\*

Concerned that the nitrogen oxide emissions by themselves and in combination with volatile organic compounds (VOC) are causing severe damage to the environment and to human health;

Recalling that the Executive Body for the Convention recognized at its second session in 1984 "the need to reduce effectively the total annual national emissions of nitrogen oxides from stationary and mobile sources or their transboundary fluxes by 1995";

Recalling as well that the Executive Body for the Convention at its fifth session in 1987 "recognized the importance of damage to the environment in many countries caused by emissions of volatile organic compounds (VOC) which, by reaction with the oxides of nitrogen, contribute to the formation of photochemical oxidants such as ozone, and consequently stressed the necessity to reduce effectively VOC emissions";

Welcoming that Parties to the Convention will sign the Protocol at the sixth session of the Executive Body in Sofia on November 1, 1988;

Considering that, beyond the measures provided for in the Protocol, immediate and effective reductions of NOx emissions are necessary;

Declare as follows:

1. The Signatories to this Declaration will implement a reduction of national annual nitrogen oxide emissions by at least 30 percent as soon as possible and at the latest by 1998, using the level of any year between 1980 and 1985 as a basis for the calculation of the reduction.
2. The Signatories call upon the other Parties to the Convention who will sign the Protocol to join them in making every effort to control and reduce substantially their national nitrogen oxide emissions or their transboundary fluxes beyond the obligations mandated by the Protocol.
3. The Signatories stress the necessity of undertaking, within the framework of the Convention and on the basis of ongoing work, effective common action to achieve substantial reductions of VOC emissions.

\* to be adopted by the Executive Body for the Convention at its 6th session (31st October - 4th November, 1988).



HOW CAN OTHER COUNTRIES MEET 30% NOX REDUCTIONS BY 1998?

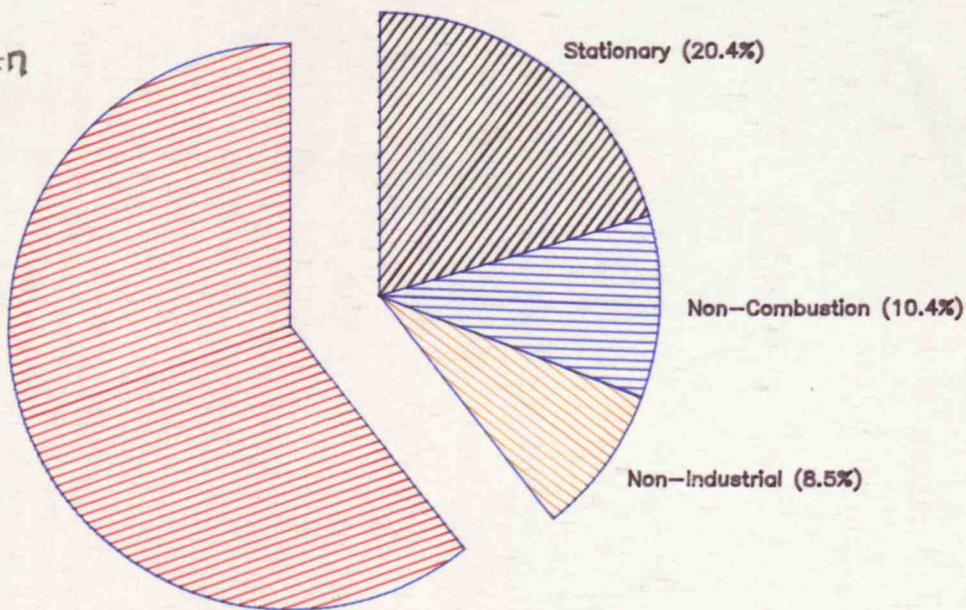
1. High current transport contribution to national NOx emissions to be reduced (80-90%) by US-type 3-way catalyst emission regulations. Examples, Switzerland, Sweden, Austria (Fig.1).
2. Selective catalytic reduction on power station emissions involving very high capital spend. Examples, Federal Republic, Denmark (Fig 2).
3. Aggressive nuclear energy policy since 1980-85. Examples, France, (Belgium as well but probably not sufficient to allow signing Declaration).
4. NL has high traffic proportion, explaining their attempts to encourage 3-way catalysts by fiscal incentives beyond the EC Luxembourg Directive on vehicle emissions. (Fig 3).
5. UK has even balance of power station and transport contributions placing equal emphasis on both for further reductions. (Fig. 3).



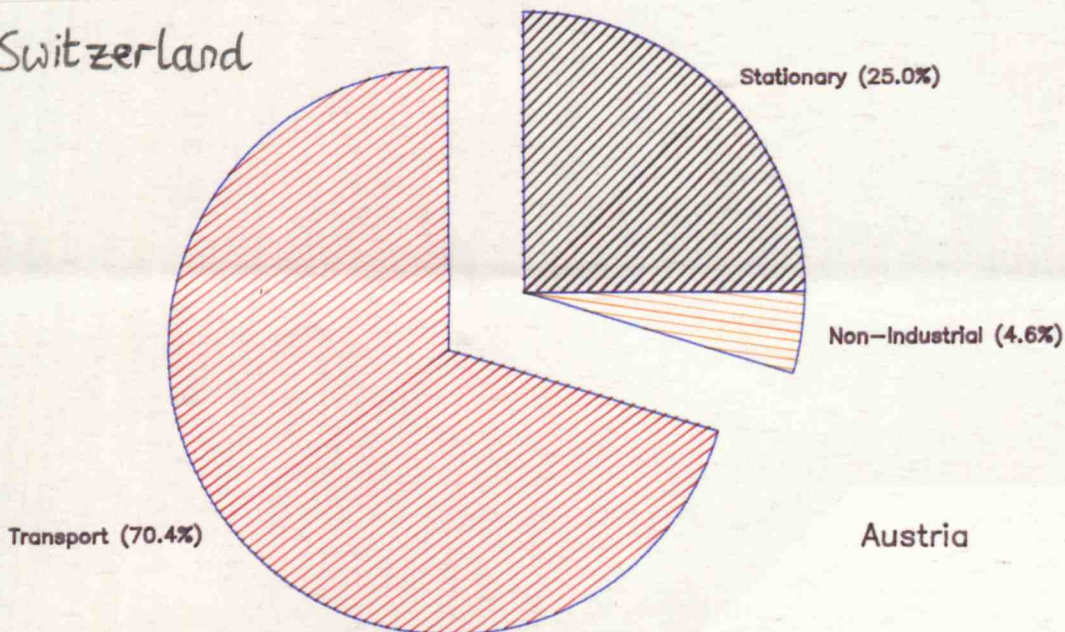
# National NO<sub>x</sub> Emissions by Sector

Fig 1

Sweden



Switzerland



Austria

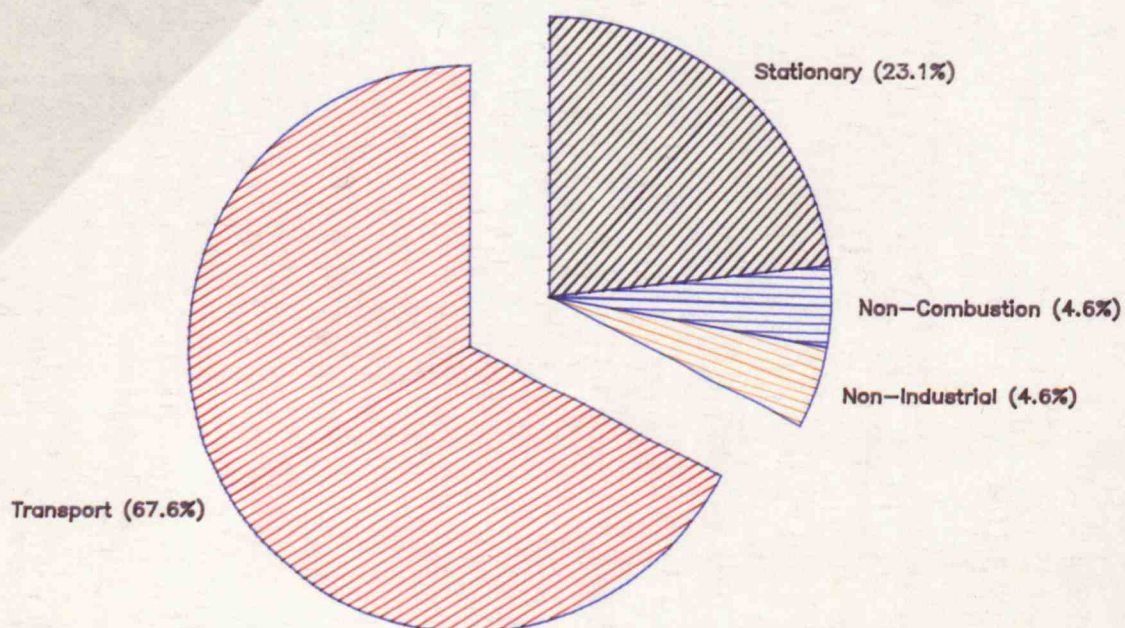
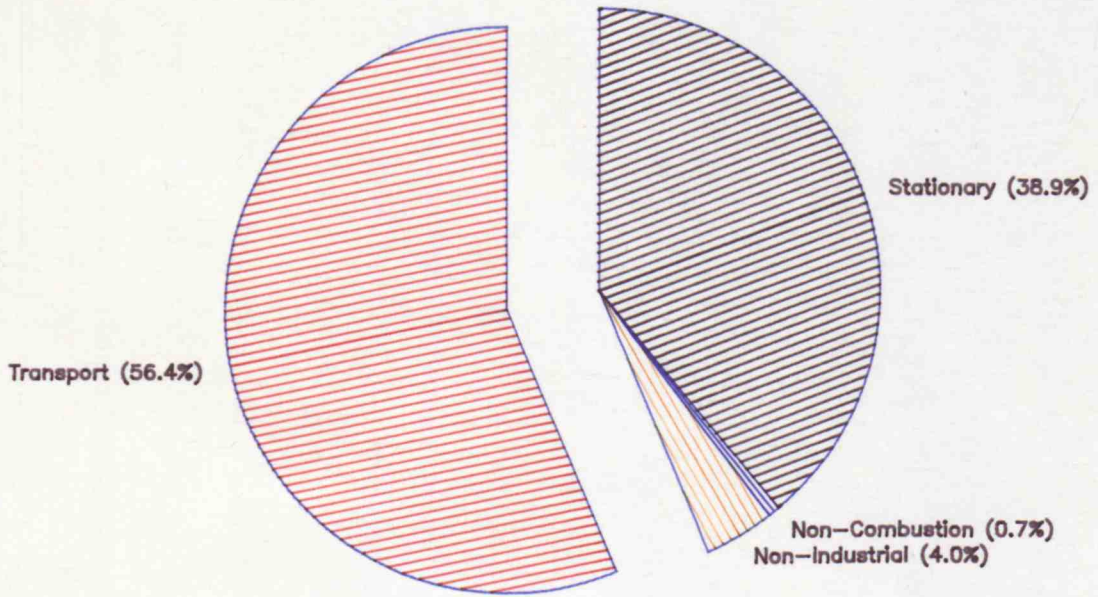




Fig 2

FRG



Denmark

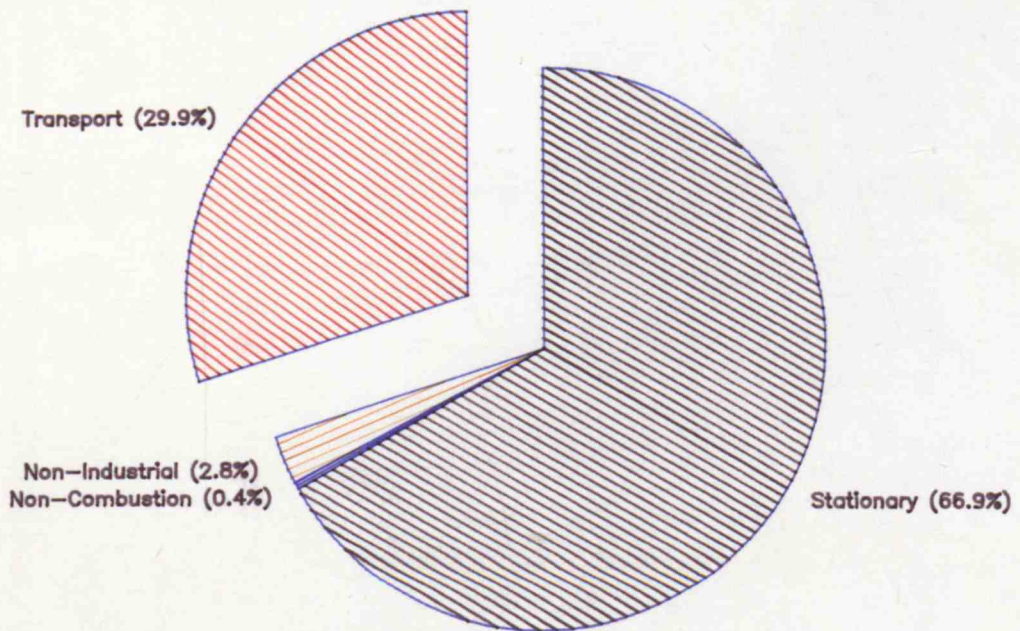
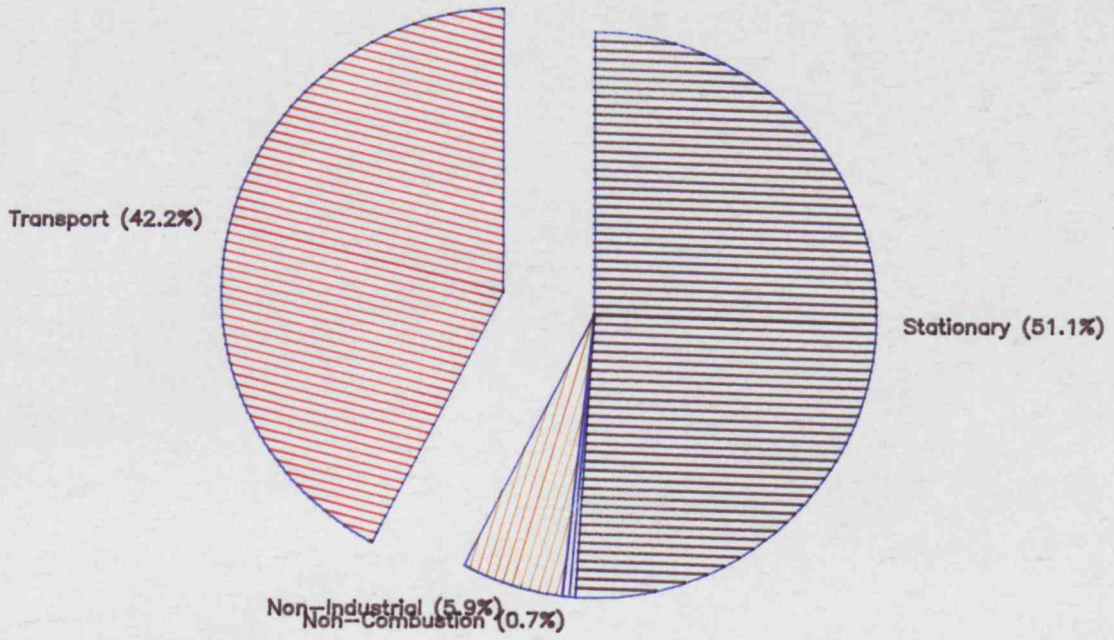




Fig 3

United Kingdom



Netherlands





NOX EMISSION PROJECTIONS FOR THE UK.

1. With energy demand and traffic growth estimates agreed between Departments as a basis for entering into binding international commitments, current control policies should give national NOx emissions 10% below 1980-85 levels by 2000. (Figure 1 curve A).
2. With the lowest growth estimates discussed between Departments, current control policies could give national NOx emissions 18% below 1980-85 by 2000. (Fig. 1 curve B).
3. To aim to achieve 30% reduction would demand severe further measures; e.g.:-

US-type 3-way catalyst  
on all cars.

Backward step on fuel  
economy and worse for CO<sub>2</sub>  
greenhouse gas emission.

2nd generation low-Nox  
burners on existing power  
stations.

Not fully proven techno-  
logy, considerable  
development cost.

Selective catalytic  
reduction on new power  
stations

Expensive and not fully  
proven technology.

Cont../..



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4. Very approximate annualised national costs for these measures are estimated to be:-

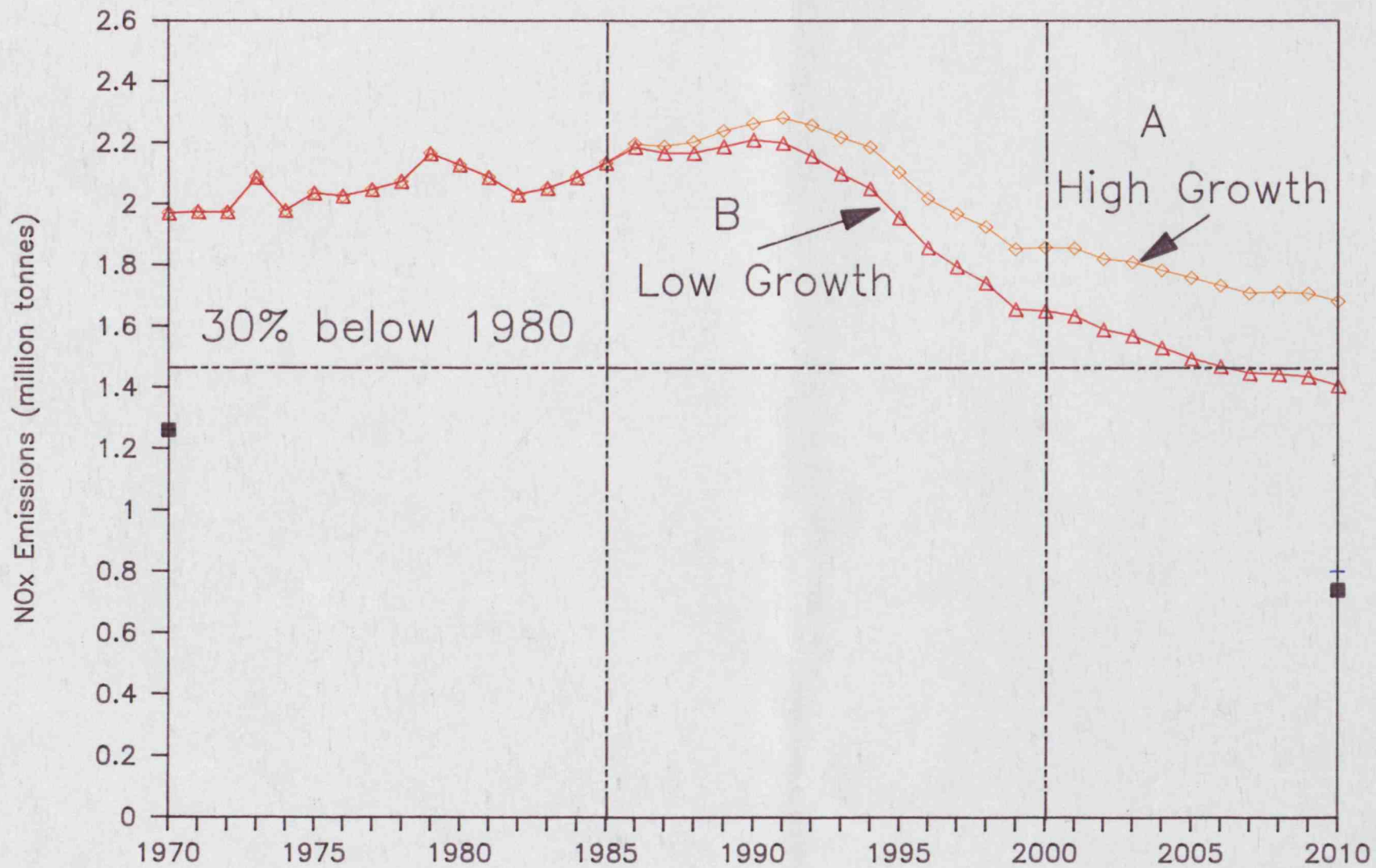
Cars £500M pa

Existing Power Stations £250M pa

New Power Stations £250M pa



# UK Total NOx





## PROPOSED UK STANCE

On Protocol

Most important step forward for the environment:

- wide support, both East and West-essential for global problems;
- commitment that scientific approach should be in operation by 1996 - tight timescale, but this is what we have always pressed for;
- commitment to practical action to stop the growth in NOx.

On UK Action

We have taken major initiatives while we have been working on the Protocol; this is why we can sign it:

- retrofitting low-NOx burners to all 12 major coal-fired power stations (£170m); low-NOx burners for all new stations;
- tighter standards for new cars agreed within EC - subject only to French reserve. Will cost motorist £850m pa. Going as far as we can while protecting lean-burn engine which is important for fuel economy and hence greenhouse effect.

*lean-burn engine*

Strong UK contribution to all international research programmes under LRTAP Convention, essential for developing critical loads approach. (Lead country on crops and integrated assessment modelling; UK scientist seconded to ECE modelling centre to develop NOx transport model; major advance in mathematical techniques needed for critical loads approach funded by DOE and published in "Nature".)

On Declaration

Much regret that a few parties have tried to upstage this important protocol.

Seeks to supplant rather than complement the Protocol's reduction targets.

Dates no doubt chosen to suit the particular abatement programmes of the countries which drafted it. For some of them it requires no practical action. Dates bear little relation to Protocol dates - 1998 hardly relevant as signatories will have critical loads approach in operation before that.



Takes us back to pre-scientific era of arbitrary percentage targets.

Brings in volatile organic compounds, which ECE already has in hand, attempting to lock them too into this outdated philosophy.

On UK aim of policy

We set ourselves an aim of policy to achieve 30% reduction on 1980 figures by the end of the 1990s back in 1985, before most countries had even begun to address NOx.

It will be difficult to achieve this aim - particularly with our continued economic success. No country is seriously considering rationing energy or motor cars. We will not cynically sign up to agreements leaving our successors to pick up the consequences, unless we are sure we can deliver them.

In any case, however, all this talk of 1998 or 2000 is academic: the Protocol will have been revised by 1996 and we will be formulating our policies on the proper scientific basis of critical loads.