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"RECENT DEVELOPMENTS IN THE EUROPEAN  
NUCLEAR INSURANCE SCENE"

by

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## RECENT DEVELOPMENTS IN THE EUROPEAN NUCLEAR INSURANCE SCENE

I thought it might be helpful if, in discussing recent developments, I were to use 1974 as a convenient base from which to discuss the changes which have occurred since the Forum's London Conference held in September of that year.

One fundamental aspect of the nuclear scene has been the development of anti-nuclear feeling in the continent of Europe by various bodies who seek to oppose the further development of nuclear activities, even for peaceful purposes. In some countries, such as West Germany and France, there have been active and violent confrontations between demonstrators and the authorities. It is not, however, part of this paper to deal with the various anti-nuclear bodies, but they have had the effect of rousing public opinion, with the result that there has been delay, not only in the construction of plants already planned in 1974, but also in delaying decisions on the further development of existing types of nuclear reactors and of the more sophisticated systems such as the high temperature reactor and the fast breeder reactor. Moreover, the demonstrators' activities have caused Insurers to consider carefully their policy wordings and conditions, but the matter is largely one of definition that poses very great difficulties if it were felt necessary to exclude from insurance covers this type of political activity.

Despite this situation, a number of new nuclear power stations has come into operation in Europe. Finland has now joined the countries operating nuclear electricity generating stations, Loviisa 1 is operational, and another new station at Olkiluoto is nearing completion, whilst additional units at each site are well under construction.

In Austria, the new Tullnerfeld station is virtually completed, but political problems have delayed its actual operation and this will not take place until the Austrian Parliament has approved the waste disposal arrangements to be made by the operators.

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In Belgium, Doel 1 and 2 and Tihange are now operative, whilst there is developing a large programme which, despite opposition, appears to be progressing satisfactorily.

Germany also has a substantial programme at present under construction, whilst in the last three years, five new stations have become operational. Ten more are planned for operation during the 1980's.

In Italy, Caorso has now begun to operate, and one or two further stations are in course of construction.

Spain is another country which has a large programme. Almaraz is now operational, while Lemoniz is expected to be operating very shortly. Nine further stations are planned to come into operation within the next four or five years.

In Sweden, the situation is again complicated owing to political problems, but Barsebäck 2 is now on stream, and three more stations are under construction.

In Switzerland, Goesgen is now operating, and in the United Kingdom the AGR station at Hinkley 'B' is operational, but at Hunterston 'B', after satisfactory initial operation, one of the reactors has had to be shut down temporarily owing to a non-nuclear incident. Six more reactors are due to come into operation within the next two to three years, whilst recently decisions have been taken to proceed with four more AGR's, whilst the possibility of constructing a PWR still remains.

In Yugoslavia, the latest newcomer to the nuclear scene in Europe, the PWR at Krsko is nearly completed, and operation is expected early next year.

Parallel with the situation as regards electricity generating stations, the nuclear fuel industry has been making progress, and the major EURODIF project at Tricastin in France is nearing completion, the first equipment tests being in progress. This is a large commercial project, using the gaseous diffusion process. Following successful operation of small pilot plants in Holland, a large commercial uranium enrichment plant at Almelo

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is nearing completion, and this will embrace the new centrifuge system. It will be operated by Urenco, which is a joint British, Dutch and German consortium. Enormous values are involved with these large scale plants, and this, of course, raises serious problems as regards the insurance aspect. Everybody will be fully aware of the long and careful enquiry carried out into the question of the expansion of fuel reprocessing facilities at Windscale in the United Kingdom where again very substantial values will be involved. At the same time, a large centrifuge plant is operating at Capenhurst and is expected to reach full capacity in 1979.

It will be seen, therefore, that despite opposition, often of an ill-informed nature, there have been substantial developments in the nuclear industry in Europe during the last few years.

#### Liability Limits

During the period under review, there have been substantial increases in the statutory limits of liability placed upon operators in a number of countries. In 1974, whilst renewal of the Price Anderson Act in the United States of America was attracting a good deal of attention, the German liability law was also under review. This has now resulted in the establishment of a liability upon nuclear power operators to provide financial security or insurance up to DM.500M from the private sector. Over and above this figure, the Government is responsible up to a maximum of DM.1,000M.

In Switzerland, the statutory limit has been increased from Sw.Frs.40M to Sw.Frs.200M, all of which must be covered by insurance. In the Netherlands, the previous maximum liability of D.Fls.50M has been doubled to D.Fls.100M, but it should be noted that smaller risks may be allowed to insure for a lower figure.

In Italy, the operator's liability has been increased to Lire 7,500M.

The new German and Swiss limits were so far in excess of the previous maxima that it posed some difficulties for Insurers, but sufficient cover has been provided to cover these stringent requirements, thanks to the worldwide system of nuclear insurance

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Pools. Bearing in mind that the limits of liability fixed in other European countries were established in some cases almost twenty years ago, it is reasonable to suppose that those countries may soon be considering their own limits, bearing in mind the effect of inflation and currency alterations over the years. The amounts stipulated in the Paris, Brussels Supplementary and Vienna Conventions may well be reviewed and possibly increased within the next year or so.

#### Nuclear Experience

The nuclear industry has remained relatively trouble free but, as was to be expected, there has been a growth in the number of Material Damage claims over the past few years, though fortunately nothing of a catastrophic nuclear nature has occurred. Some of the incidents of a conventional nature have nevertheless been quite costly, and given the right combination of adverse circumstances, might well have led to more serious nuclear incidents and claims. Two factors have clearly emerged, I think, one being that the cost of decontamination in respect of a nuclear incident can be extremely high relative to the actual damage caused. The second factor is the importance of maximum protection for the cable ducts. Whilst this is not a matter affecting solely the nuclear power stations, the fact remains that the cable ducts which carry the power for the operation of the nuclear safeguards and controls are particularly vulnerable since if fire destroys or damages the cables operating these controls, the possibility of a major nuclear incident cannot be excluded.

On the personal injury side, we are now beginning to see the emergence of claims by work people, following an alleged exposure to radiation many years previously. The fact that the deceased or injured person was working at a nuclear installation at some time in the past is increasingly put forward as a justification for the submission of a claim. These cases are expensive to investigate, even if they prove to be without merit and never come to trial in court, but experience reinforces the necessity for the operators to maintain with the greatest care health physics records over long periods.

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### Capacity

I see that in 1974 I made the comment that the provision of capacity was the great problem that faced the nuclear insurance industry at that time. I also said that a major operation had been mounted worldwide for increased capacity, and that this had achieved a very satisfactory response. I then ventured to suggest that much still remained to be achieved, bearing in mind the growth in large multi-reactor sites and the increase in the large values concerned.

Since that time, nuclear Insurers worldwide have been successful in accumulating further capacity, and it is not unreasonable to suggest that this is now something like three times what was available in 1973. Even so, with the values being projected forward into the 1980's, it is clear that further capacity will be required, and its provision is clearly still the major problem facing Insurers.

This becomes increasingly apparent when cover is required for Machinery Breakdown insurance within the High Radioactivity Zone, or when insurance against Consequential Loss following a nuclear incident is required. These two types of insurance cover are not readily available. They are extremely heavy risks from an insurance standpoint, and can only be undertaken when there is sufficient margin left in insurance capacity after satisfying the primary need for insurance against Material Damage.

Then again, it is not only these aspects which have to be taken into account, for the limits of the operator's liability have been very substantially increased in some countries, whilst others will no doubt increase their limits over the next few years. Consequently, Insurers are faced with the twin problem of increasing capacity, not only for Material Damage but also for Liability insurance. Provided that experience remains satisfactory, and also that premium levels can be reasonably maintained, I feel sure that we shall see a steady growth in capacity in the years ahead. This will be helped by the establishment in newly developing nuclear countries of similar net line insurance Pools of which several more may be expected to commence operations within the next year or so.

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Taking into consideration experience, there has been a steady reduction in rating levels over the past few years, and provided this is not allowed to develop to the point that inadequate premiums are charged, it is clearly right that operators should enjoy through their reduced premiums the benefit of their good experience, but I must once again point to the potential catastrophic nature of this form of insurance, and the need for an adequate premium level if the maximum amount of insurance is to be provided by the nuclear insurance Pools of the world.

