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Session 3: LTO - Benoit DE BOECK

The safety approach for demonstrating safe long term operation rests mainly on 2 pillars: management of ageing and improvements of safety.

The management of ageing (including the problems related to obsolescence) is not necessarily easy but the methodology is well mastered. The IAEA in particular has a number of publications on the subject.

The second issue is more tricky. But first, why should safety be improved? The answer is clear: rules and regulations evolve; expectations for the safety level are rising; more recent plants are safer. You would also expect that a car you buy today is safer than the ones that were on the market in the past.

How much to improve safety is another matter. How safe is safe enough for LTO? How to come to an agreed design upgrade? What means “Implementation of reasonably practicable safety improvements”?

The answer given to those questions differ from country to country. In many European countries it is required to make the best efforts to reduce as much as possible the gap between the safety of old plants and the safety of modern plants, and it is up to the utility to make proposals for safety improvements and try to convince the regulator that those proposals are ambitious enough.

In some other countries it seems that it is sufficient to take experience feedback into account and show that safety is maintained at the same level as initially foreseen and accepted. Why this difference?

I think that part of the answer is cultural. I have the feeling that there are countries where the utilities are expecting that the regulator will be prescriptive and tell them what to do and how to do it. They are not used to be put in a situation where they have to convince the regulator that they are good enough. In other countries the cultural approach to safety is different.

It is clear that it is difficult to be too prescriptive when it comes to defining the required safety improvements that have to be implemented in the frame of LTO: too much or too little will miss the goal of “as high as reasonably practicable”. Moreover if you prescribe solutions, you take part of the responsibility for safety away from the utility.

This idea of cultural difference to help understand the different approaches to LTO came to me recently and I have not checked how far it is true. I put it here on the table for your consideration.