REPUBLIQUE FRANCAISE

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Position of the ASN Commission: "The safety of new nuclear reactor construction projects worldwide has to be ensured"

At a time when, taking into account the current energy situation, many countries are seeking to build nuclear reactors, ASN is taking a stand.

The mission of the French Nuclear Safety Authority (ASN) is the regulation of nuclear safety and radiation protection in France on behalf of the State, and informing the public. To carry out its mission, ASN must also contribute to developing and sustaining a high level of nuclear safety worldwide. This is particularly the case in countries which do not yet have electricity-producing civil nuclear power plants and wish to acquire them.

Let us be frank – learning about nuclear safety is a long process.

The International Atomic Energy Agency (IAEA), in 2007, and the industrialised nations' International Nuclear Regulators' Association (INRA), in 2008, have clearly stated that a considerable period of time is necessary to acquire competences and a true safety culture before operating a nuclear power station. It is the responsibility of a country, upon committing itself for many years to a nuclear programme which demands significant investment, to create effective regulation of nuclear safety.

First and foremost, it is necessary to establish a suitably qualified and independent safety authority. This does not consist simply of importing competences, nor writing or even copying specific laws based on existing models. At least 5 years are needed to create a law, establish an authority and render it operational by mobilizing appropriate competences in terms of safety and regulation.

Furthermore, international experience shows that examination by this authority of an authorization application for the creation of a nuclear reactor takes 2 to 10 years, a period which is all the longer for there being no local operation of a nuclear installation of lesser complexity on which to implement the system.

Finally, the construction time of an electricity-producing reactor is approximately 5 years, due most notably to technology-related time frames which cannot be reduced, and the need for site supervision.

This leads therefore to a minimum period of 15 years before it is possible to begin operating a nuclear power reactor in favourable conditions.

ASN can assist countries which are new to nuclear power and seek help in developing the necessary legislative and regulatory framework, staff in training, nuclear pressurised equipment regulation, examination of safety reports, construction site inspection and operation regulation, which should all remain the responsibility of the country's own safety authority.

ASN will assist existing or new safety authorities in these countries. It falls to the government to work with the countries themselves. ASN will give priority to cooperating with countries which utilise technologies of which it has experience in France.

The request for cooperation can also relate to a country already possessing nuclear facilities and seeking to develop its legislative and regulatory framework and its nuclear safety authority, as well as dismantling existing installations and storing or processing waste.

Priorities among the requests for international cooperation have to be set up

The worldwide nuclear sector currently consists of 440 reactors installed in 31 countries. At present, there are 250 reactors, either under construction or at the planning stage. These projects relate to countries possessing in-service reactors and wishing to develop or re-launch reactor construction (most notably China, India, the USA, the UK, South Africa, Brazil, Eastern European nations…). Reactor construction projects also relate to countries wishing to access nuclear power for the first time (for instance Algeria, the United Arab Emirates, Saudi Arabia, Jordan and Morocco).

Faced with a growing need for competent personnel in the nuclear sector, among construction firms, plant operators and safety authorities, and to offset retirement of existing staff, education facilities will need to be created or developed. This will take several years and will only show results in the medium term.

All these factors mean all parties involved must set priorities. For ASN, these priorities must be based on geophysical, economic, political, social, and technological criteria, as well as adhesion to certain international treaties, and criteria resulting from the work and experience of IAEA, INRA and ASN itself.

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ASN considers developing and sustaining a high level of nuclear safety worldwide is one of its key functions, which it shares with its foreign counterparts. It will contribute to any international initiative which has an ethical and responsible approach to safety issues. However, it falls to those countries which are purchasing nuclear installations to equip themselves with the necessary tools to ensure they function in a safe manner. They must therefore have the necessary competences, qualified staff, institutions and legal instruments.

Rigour and competence in administrative procedures and independence of the safety authorities are essential to the construction and operation of new nuclear electricity production plants. This takes time.

The college of ASN

Signed:

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