Does the EU nuclear safety directive risk fragmenting international standards

Seeking to strengthen nuclear safety standards in the wake of the 2011 Fukushima Daiichi accident, in July last year the European Union amended the nuclear safety directive it had adopted in 2009.

Back in 2009 the adoption of the nuclear safety directive marked an important development in regulating nuclear safety in the EU. Building on the provisions of the Convention on Nuclear Safety, an incentive-only instrument, and the principles adopted by the International Atomic Energy Agency (IAEA), the EU became the first regional actor to adopt legally-binding nuclear safety rules. The 2009 directive granted the EU for the first time express competence in nuclear safety. Its adoption met, however, with strong opposition from industry and national regulators, which consider nuclear energy as falling within the purview of member states.

Less than five years later, the European Commission has given itself a greater role in nuclear safety. The Commission claims that these new rules were needed in light of the Fukushima accident.

Nuclear safety is a priority and with 132 nuclear reactors operating in the EU the Commission rightly seeks to ensure that strict standards apply to the industry. And the sector ought to be prepared to meet them if it is to regain public trust. However, does the amended directive enhance nuclear safety and does it risk fragmenting existing international standards? The Commission correctly identified key areas of nuclear safety where lessons should be learned from the Fukushima accident, namely: the culture of collusion between Japan's nuclear industry and the national regulator and the failure to implement the findings of IAEA's peer reviews of Japan's nuclear power plants. Accordingly, the amended directive seeks to strengthen the independence of national regulators and mandates peer reviews of new nuclear power plants across the EU to be undertaken every six years in addition to national safety assessments, which are to be conducted at least every ten years.

Importantly, the directive requires that the recommendations of such peer reviews be implemented. If the Commission determines that there has been a substantial deviation between the recommendation and a member state's proposed action, under the amended

directive it has the power to assign a verification team. Another vital lesson from the Fukushima accident regarding on-site emergency preparedness and response is also incorporated, with emergency plans now requiring regular updates and continuous training for operatives.

However, many are concerned that the Fukushima accident was simply an excuse for the Commission to flex its muscles further and appropriate more powers in a field in which it had no role until 2009. In February this year, when the amendments were under discussion, the chair of the European Nuclear Safety Regulator Group, Gerald Hennenhöfer, noted that the Commission simply did not have adequate expertise to ensure and assess nuclear safety in the region.

This important concern has not been addressed in the amended directive. Adding an additional layer of supervision does not of itself enhance nuclear safety. In fact it could potentially undermine it. And this risk appears real, particularly if the bureaucratic stress tests, which were conducted at the insistence of the Commission post-Fukushima accident are indicative of the kind of supervision planned going forward.

Second, many consider that the provisions of the amended directive do not go far enough to ensure the independence of national regulators. The Commission recognised that the specialised nature of the sector and limited availability of suitably qualified persons, which led to significant rotation of executive staff, and determined that: "special attention should be given to avoiding conflicts of interest". The amended directive falls short of prescribing specific conflicts of interest rules including regarding cooling-off periods. It could have adopted similar measures on independence as those prescribed for independent transmission system operators in the electricity and gas industries.

In addition, some key new provisions in the amended directive are also not precisely defined. By way of example, the amended directive imposes an obligation on new nuclear power plants to "practically eliminate the occurrence of all accident sequence that could cause a radioactive release". For existing new nuclear power plants, this requirement must be complied with "to the extent reasonably achievable". The terms "practically eliminate" and "reasonably achievable" are not defined. Presumably, the Commission intends to adopt guidelines on the ambit of its terms, but this prescriptive approach could spur further

resistance from national regulators. For now, the industry remains uncertain as to the scope of its obligations under EU law. This uncertainty could potentially deter future investments in nuclear power without enhancing nuclear safety in the region.

Undoubtedly making nuclear safety peer reviews mandatory was the right move, but with EU member states already submitting the same to the IAEA, there is now a risk of a proliferation of reviews. With the EU setting its own standards, regulators and new nuclear power plant operators will have to prepare differing reports, potentially be subject to endless reviews and find themselves obliged to comply with varying recommendations. Also, over time, EU standards are likely to diverge from the IAEA standards, especially once the Commission starts issuing its guidelines. The key lesson from the Fukushima accident was the need to ensure that the recommendations from IAEA peer reviews were implemented – not the prescription of more reviews.

A stronger and clearer way forward would have been for the amended directive to have made IAEA peer reviews mandatory and obliged member states to implement their recommendations. The Commission could have been granted the power to ensure that these recommendations are adopted. Instead, by setting its own standards, the EU's approach may in fact undermine attempts to ensure greater consistency on international nuclear safety standards and their implementation worldwide and thus undermine nuclear safety.

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