

EURATOM and the EU enlargement: What new regulatory framework for a sustainable nuclear common market?

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1. Overview

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*"Today marks a step change for the European Union. Energy policy was a core area at the start of the European project. We must now return it to centre stage. The challenges of climate change, increasing import dependence and higher energy prices are faced by all EU members. A common European response is necessary to deliver sustainable, secure and competitive energy (...). We must act now, to shape tomorrow's world" (European Commission President José Manuel Barroso, January the 10th 2007, *An Energy Policy for Europe: Energy for a Changing World*).*

Since January the 1st 2007, the EU counts 27 member countries and 500 million inhabitants and 8 other countries are already candidates for a future membership. Beyond political matters, the constant enlargement of the EU raises crucial economic issues. Among them, energy questions are central. Indeed, facing the international struggle against climate change, the deregulation of energy markets, the depletion of fossil resources and the growth of world energy demand, the larger Europe has to take into account, more than ever, these new environmental and economic constraints which henceforth become unavoidable. In the energy field, the main question concerns the conditions under which the larger Europe will manage to provide a clean and sustainable energy supply, meeting the new requirements. In this respect, the support to nuclear energy stands for a possible solution. With the recent enlargement, the EU counts 153 nuclear reactors, that is, 35% of the world installed nuclear capacity (137 GWe), before the USA. With such a capacity, the EU can reasonably expect to become one of the most dynamic actors in the supply of independent, clean and durable energy. On January the 10th 2007, in the Green Book *A New Energy Policy for Europe: Energy for a Changing World*, the European Commission has repeated its support to nuclear energy, particularly with the view to reduce CO₂ emissions by 20% by 2020. Commissioner for Energy Policy, Andris Piebalgs said: *"If we take the right decisions now, Europe can lead the world to a new industrial revolution: the development of a low carbon economy"*. Nuclear energy has undeniable assets *vis-à-vis* its alternatives in terms of availability, competitiveness and air pollution. Besides, the EU has a large expertise in this matter since the EURATOM Treaty. Initially created to coordinate the EU members' R&D programmes for a peaceful use of nuclear energy, EURATOM nowadays contributes to the pooling of knowledge, infrastructures and financing of nuclear energy. It ensures the security of the atomic energy supply within the framework of a centralized control. It also aims at guaranteeing a high level of safety for populations and prevents any misuse of pacific nuclear programmes for military ends. Therefore, EURATOM stands for a powerful tool at the service of a sustainable and dynamic European nuclear energy supply. However, the repeated enlargement of the EU implies an increasing heterogeneity of its members which might slow down this trend in the near future. First, the new Eastern member countries, which brought, since 2004, 23 additional nuclear reactors within the EU, are not submitted to the same nuclear safety norms and technological standards as the others. Secondly, as far as compensation and reparation of damages in case of nuclear accident are concerned, all the EU members have not signed the same liability conventions. Further, some of the future new candidates have even no regulatory plan about those questions. In spite of the enlargement and of this increasing heterogeneity, EURATOM, created in 1957, has not integrated major changes since then. Hence, what are the conditions to reach a sustainable, safe, and competitive nuclear energy for the enlarged EU? What changes EURATOM should make in order to take up this challenge?

2. Methods

This paper is based on the literature on regulation and market structures (common market), nuclear safety and liability and climate change (see references below). It proceeds as follows. First, it aims at presenting the current energy landscape and requirements in the EU and the ability of nuclear energy to cope with them. Secondly, this paper analyses Euratom as a regulatory tool to support and foster the

nuclear common market. Thirdly, as far as the enlarged EU is concerned, it suggests regulatory changes and alternative conditions for a new Euratom, more fitted to the current constraints.

3. Results

The new Euratom regulatory framework proposed herein aims at creating a common nuclear market achieving 4 goals: cleanliness, sustainability, safety and acceptability

(1) cleanliness: the new Euratom must define a precise common programme about the disposal of radioactive wastes and decommissioning. Concerning air pollution, the development of nuclear energy in the EU will allow a convergence towards Kyoto objectives with the reduction of CO₂ emissions.

(2) sustainability: with its large development and cooperation between all members, nuclear energy will strengthen its current competitive advantage. Moreover, thanks to a unique and common liability convention, the EU's nuclear operators will be able to guarantee more efficient and faster compensation and reparation in case of accident on their installations.

(3) safety: Euratom must provide itself with a common control system and implement uniform safety standards and designs (culture of best practice) for the protection of workers and the general public. This will ensure a high level of nuclear safety in Europe and thus, increase the acceptability of nuclear energy.

(4) acceptability: the acceptability of nuclear energy will rise if Euratom and EU favour transparency by public participation.

4. Conclusions

To sum up, the larger EU faces new energy challenges which require a new common energy policy. Nuclear energy appears to be a good solution to meet current and future environmental and economic objectives. To foster its development at European level and create a competitive and sustainable common nuclear market, the founding member States have recently declared that a reconsideration of Euratom was necessary in order to cope with the enlargement and the heterogeneity of members. In the perspective of the 7th framework programme of EURATOM (2007-2011), they advocated in favour of an intergovernmental conference to implement the necessary regulatory changes. In this context, this paper intends to anticipate the discussions and to highlight the main issues to negotiate.

5. References

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