

Investments in nuclear energy in Europe: building a long-term framework to allow the upgrading and financing of projects

October 20th, 2016 - Brussels

THE ISSUE

The European energy strategy must be set in a long-term perspective: future investments will be considerable. They need political decisions and a stable and clear regulatory framework. The latter must articulate the climate imperative and the European industrial imperative, and the choice of energy mix must be consistent with a well-balanced and competitive growth. **To meet the needs and fight against climate change, all decarbonized sources are required, and nuclear power is an ally for these objectives.** A diverse mix combining nuclear with other carbon-free sources is the best way to promote the competitiveness of energy intensive industries and to provide opportunities to the nuclear energy industry on the global market. **What will be the place of nuclear power in the European mix?** The British government approved the construction of two EPR reactors at Hinkley Point in southwest England. What signal does this choice send to Europe? Is a new European energy trend emerging? How will the EU cope with it and adapt its domestic market to a non-discriminatory treatment of nuclear power?

Financing the nuclear industry requires political visibility and the creation of conditions for the profitability of long-term investments, which means government guarantees. Today, however, the European energy situation is characterized by instability, with major market distortions and a lack of consistency between our energy policy objectives (transition to a low-carbon energy mix, security of supply and economic competitiveness), the means used (RES grants, absence of price signals valuing nuclear in its low-carbon dimension), and an inadequate spot market for renewables and nuclear.

The European fleet is the world's first nuclear fleet, the experience of farmers and the level of security requirements are the highest in the world.

While this world is experiencing a nuclear power renaissance, Europe must play its card on the export markets, while preserving its industrial assets throughout the supply chain -from fuel processing to decommissioning and management of waste- without losing its expertise in the construction of new power plants. The dismantling of 130 currently operating reactors in Europe by 2050 can be an opportunity for the construction of new production capacities, which are indispensable to the maintenance and development of our skills in the sector.

Considering the European Union's energy objectives, and in accordance with the pressing needs of the development of its industry within the global competition and the reduction of its internal imbalances, it is necessary to support the sector's development:

- With the **valorisation of projects based on the fleet renewal objective:** modernization and adaptation to the post-Fukushima safety standards, new plants called to replace current capacities, decommissioning and construction of disposal facilities for radioactive waste, conditions to achieve profitability and funding.

- By **investing in human capital** (European training for mobility, youth engagement in scientific professions ...) and research and innovation in order to remain attractive vis-à-vis growth drivers particularly in Asia, and think about the future of nuclear power.

- By **reforming the electricity and carbon markets which is necessary in order to mobilize long-term investors.**

The Commission has proposed an «Indicative Programme» in April, focusing on investments related to improvements in post-Fukushima safety and operational safety of existing facilities. How will it promote investment in new power projects?

The plants are highly capital-intensive, we must reform the market framework to obtain a long-term price signal necessary to finance these projects. Subsidy reform mechanisms for renewable energy, implementation of capacity mechanisms, and especially a strong path for carbon pricing with the introduction of a carbon tax in the electricity sector in order to overcome the shortcomings of the ETS European market are necessary, but not sufficient. Is it possible to imagine an industry such as the nuclear one -which is not a commodity like any other- without incentives and government guarantees? Will there be any specific financing offers (EIB type)? All this must be considered in a long-term contract market which has to be built in parallel with the spot market. Nuclear countries already obtained derogations from market policy: Excelltium in France, Mankala in Finland, CfDs, «Contract for difference», in the UK.

Could those CfDs (accompanied by «Credit Guarantees»), accepted by the Commission, become a model for the Union? While reviving interest in nuclear power, it would achieve the European competitiveness policy, energy security and reduction of GHGs objectives. Indeed, the British used a cost / benefit analysis for nuclear technology in the light of these objectives, and if the price is high, it is because it includes the costs of global warming and safety of their gas supply... Thus the price per kwh for 3rd generation nuclear will be higher than the price of gas (not to mention shale gas or coal), but -besides the fact that low prices increase consumption- it will be less volatile, providing readability in the long term, and thus ensuring a greater stability of electricity prices (especially when -once the technology is well-managed - the price of production itself will be stable).

Projects are seeking their funding and are combining partnerships with direct investors and loans, with a capital contribution from the

seller to finance the project. Nuclear power is associated with certain risks, the political one not being the least of them. Even for the major industrialists, investment partnerships are necessary, as in the case of Hinkley Point, with the entry of the Chinese sovereign wealth fund. In Finland, Rosatom will take a 34% stake in the capital of Fennovoima, and goes further by offering its BOOT model (Build - Own - Operate - Transfer) where all the construction, start-up and early operations risks are borne by the seller in exchange of compensation guaranteed by a fixed price per kWh sold. It is the pattern used for the Akkuyu project in Turkey. Is this "aggressive" policy of Rosatom acceptable in the European Union? How are the negotiations between the EU and Russia going on? And not least regarding the Kaliningrad project, at the border with Lithuania?

Today, the R & D funding goes through partnerships between member countries sharing the same objectives and between public and private players. Europe is innovative in this area with the Commission's initiatives on the SNETP platform where manufacturers are highly mobilized. Initiatives are also taken to reinvent the operational modes, for example through new business models of cooperative and pooled R&D. Could they inspire us when building power plants and imagine enhanced cooperation -or variable-geometry cooperation- to propose and fund new projects?

We are talking about highly skilled jobs located in Europe (800 000 jobs today), requiring significant training and nuclear skills investments, promoting mobility within the European sector.

These questions -which are the subject of *La Lettre des Entretiens Européens* - are at the heart of the debates of *Les Entretiens Européens*, organized in partnership with DG Energy of the European Commission, FORATOM, and many industrial and regional players, from Europe and the world.



Les Entretiens Européens
& Eurafricains

4 rue Froidevaux, 75014 Paris
Tél. : 00 33 (0)1 43 21 96 76
www.entretiens-europeens.org