

# **BUILDING FUTURES IN CONTESTED INDUSTRIES: WHICH CONTRIBUTION OF ELECTRONUCLEAR SCENARIOS IN FRAMING NUCLEAR-RELATED POLITICAL DECISIONS?**

**Stéphanie Tillement** (IMT Atlantique, Campus de Nantes, France)

France is currently engaged, as many other countries in the world, in an energy transition process embedded in the 2015 Law for Energetic Transition and Green Growth (LTECV 2015). Within this policy framework, the “Low Carbone” National Strategy provides the strategic guidelines for reducing greenhouse gas emissions in France. The French situation constitutes an “extreme case” since almost 75% of electricity mix is composed of nuclear power. Its place in the future energetic mix is particularly debated and still very uncertain. To address these issues, forecasting, planning and prospective studies become more prevalent for informing and supporting decisions, whether technological or political. Regarding nuclear-related decisions, a specific tool, the electronuclear scenario (or fuel cycle simulation tool) and the associated processes play an increasingly important role in building and transferring knowledge and in framing the debates and discussions between different stakeholders regarding the EET. Scenarios appear to be essential tools for enlightening and evaluating future nuclear technologies (such as Generation III or Generation IV reactors). As regards nuclear energy, the drivers of innovation are related to many issues, such as safety, industrial and economic performance, or the managing radioactive materials and waste. Understanding decisions processes regarding the future place of nuclear energy in the electricity mix requires to replace actors, discourses and collective actions in their socio-historic trajectory and legislative environment.

This lecture proposes a pragmatic and dynamic analysis of the scenario, seen as an object and as a collective process, through the investigation of how this socio-technical device supports and legitimates the participation of different actors in nuclear research and innovation in the French context. While it is widely agreed that scenario is not a purely objective tool and that it involves institutional, occupational and identity dimensions, little is known about what actually is a scenario and about its real contribution in decision-making processes: do they really inform decisions? Do they support discussion and cooperation, as well as the development and enhancement of expertise, among the different groups involved? Do politicians really have access and consult scenarios?

Drawing on a current qualitative research, this lecture intends to bring some answers to these questions. In terms of potential contributions, our study enables to better qualify drivers and obstacles for the scenario to play an active role in decision-making processes. It shows its positive contributions in terms of supporting knowledge transfer & translation, discussion and collective learning, while maintaining diversity of point of views, but also the difficulties associated to instrumentalization practices or opacity. It highlights the many roles (still to be deepened) that the different stakeholders make the scenario play and how it affects the qualities of decisions.