

[Guest Blog: European strategies for low carbon energy security](#)

What are the energy security implications of low-carbon mega-projects like offshore wind farms or desert solar arrays, and how do we manage new low-carbon risks? These are among the questions asked in an EU-funded project set to report this month, as project coordinator Patrizia Lombardi outlines.

Security of supply, sustainability, and competitiveness are the three complementary pillars of the [European energy policy](#) and have been translated into the main goals of the more recent [EU energy strategy](#). These components have also been reconfirmed in the EU's [2020 to 2030 transition framework for climate and energy policies](#).

However, while the EU has been successful in institutionalizing a climate policy, it has not in our view been able to formulate a successful energy security policy, in spite of the fact that energy security has been growing in importance on the political agenda. Only a few scenarios, among those produced by key modeling exercises, address the potential synergies between climate change and energy security, and these mainly arise from the agenda of international negotiations over the last fifteen years on climate emission reduction targets.

This is the policy background for the EU-funded project I am coordinating, [MILESECURE-2050](#) (Multidimensional Impact of the Low-carbon European Strategy on Energy Security, and socio-economic dimension up to 2050 perspective).

Two major challenges are impending upon Europe's energy future: the achievement of a secure energy supply; and a move from dependency on non-renewable sources to a dependency on renewable energy. These challenges call for energy transitions that require we start thinking in novel ways about energy security, and the associated market relations, and social and institutional roles and responsibilities.

Some of the aspects our [project](#) has considered in detail include:

- Security implications of distributed energy systems and renewable energy mega-projects, e.g., North African solar arrays and North Sea wind farms
- Centralized vs. decentralized generation
- Means of achieving coherence between security and climate policies
- Risk management in low carbon energy systems

The project has also sought to connect 'non-technical' factors to quantitative scenarios. This is, to the best of our knowledge, the first time non-technical aspects of the energy transition are quantified in a harmonised way, and then integrated in modelling.

[Patrizia Lombardi](#) is Full Professor at the Politecnico di Torino, Italy, and the Coordinator of MILESECURE-2050. The project team held a [seminar](#) in Brussels before Christmas, and are completing a book, Low-carbon Energy Security from a European Perspective, which is set for publication this month.