

# MILESECURE-2050

Multidimensional Impact of the  
Low-carbon European Strategy on Energy Security, and Socio-  
Economic Dimension up to 2050 perspective



## *Regional Workshop*

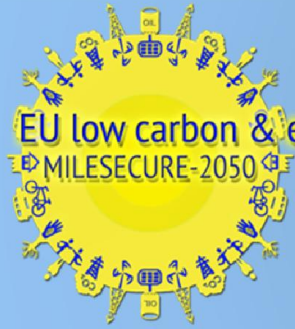
### **Social aspects of energy transition**

### **Effects of energy transition in Europe with reference to MILESECURE**

*Warsaw, June 26, 2015*



This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no. 320169



EU low carbon & energy security

MILESECURE-2050

## MILESECURE-2050

Multidimensional Impact of the  
Low-carbon European Strategy on Energy Security, and Socio-  
Economic Dimension up to 2050 perspective

# Introduction *to the project*

Patrizia Lombardi - Jacopo Toniolo (Politecnico di Torino)

Coordinator of MILESECURE-2050



**NEUF 2015 – Session 4**

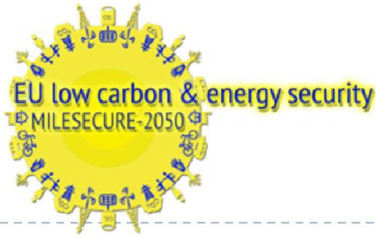
**June 26, 2015**

This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no. 320169

# Background problems

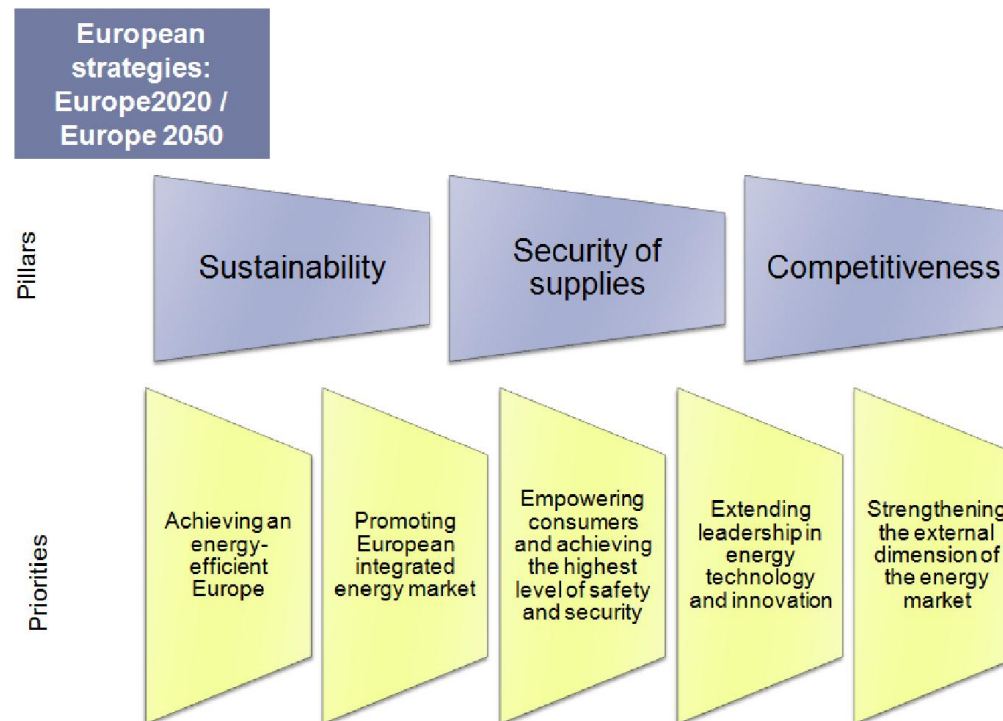
---

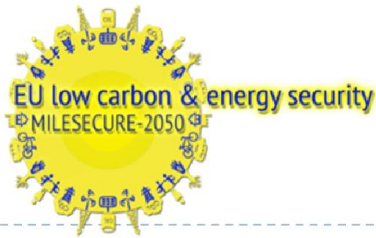




# Background

- ▶ **Sustainability, security of supply and competitiveness** are the three complementary pillars of the European energy policy.
- ▶ These three pillars have been translated into the main goals of the more recent **EU energy strategy**.



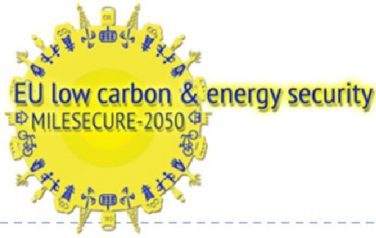


## Background problems

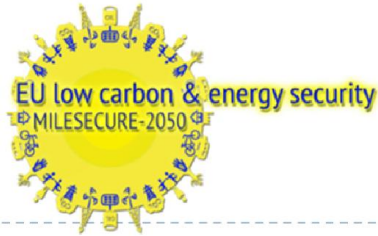
---

- ▶ While the EU has been successful in institutionalising a climate policy, it has not yet been able to formulate a successful **energy security policy**
- ▶ Energy challenges, and therefore energy security and energy transition options **vary across European countries.**
- ▶ [...]policies aimed at the reduction of GHG emission may affect the **resilience** of the energy system [...]” (EC, 2013)

# Project objectives and approach



- ▶ MILESECURE-2050 aims to understand and overcome the political, economic and behavioural trends that led Europe to its difficulties in reducing **fossil fuel consumption**, and in diversifying its energy balance at rates which guarantee European **energy security** in the next years, reduce the threat of **climate change**, and diminish the risk of an energy gap in the coming decades.



## *A Systemic perspective*

---

### *Multiple perspectives on societal transition*

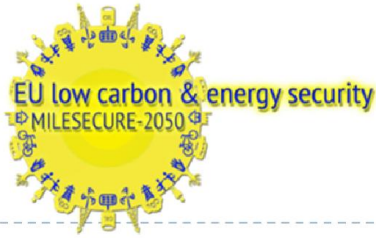
MILESECURE-2050 has adopted a combined perspective, which covers the interactions and synergies between societal processes, taking a more **holistic approach** to understanding societal change, being influenced by multiple factors.

(MILESECURE-2050 DoW, 2012)



Main findings

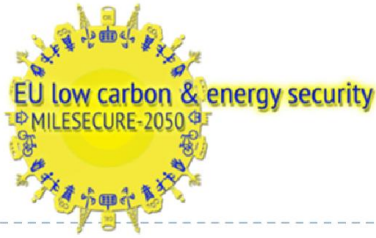
---



## Energy security: a definition

---

- ▶ *A Energy secure system is one “evolving over time with an adequate capacity to absorb **adverse uncertain events**, so that it is able to continue satisfying the energy service needs of its intended users with ‘acceptable’ changes in their amount and prices” (Gracceva and Zeniewski, 2012)*

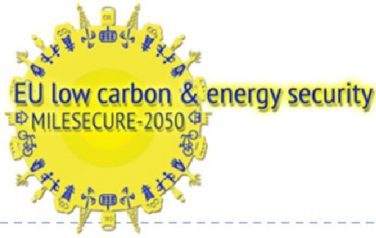


## Local energy transition research

---

- ▶ A big part of the MILESECURE-2050 research has been based on the identification of a series of **"anticipatory experiences"** of energy transition,
- ▶ Such experiences were understood as already existing "parts" of a future post-carbon society allowing to focus on **concrete factual elements** and not mere hypotheses



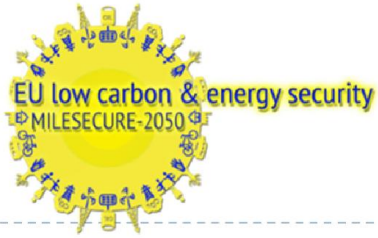


# The human factor as engine of energy transition

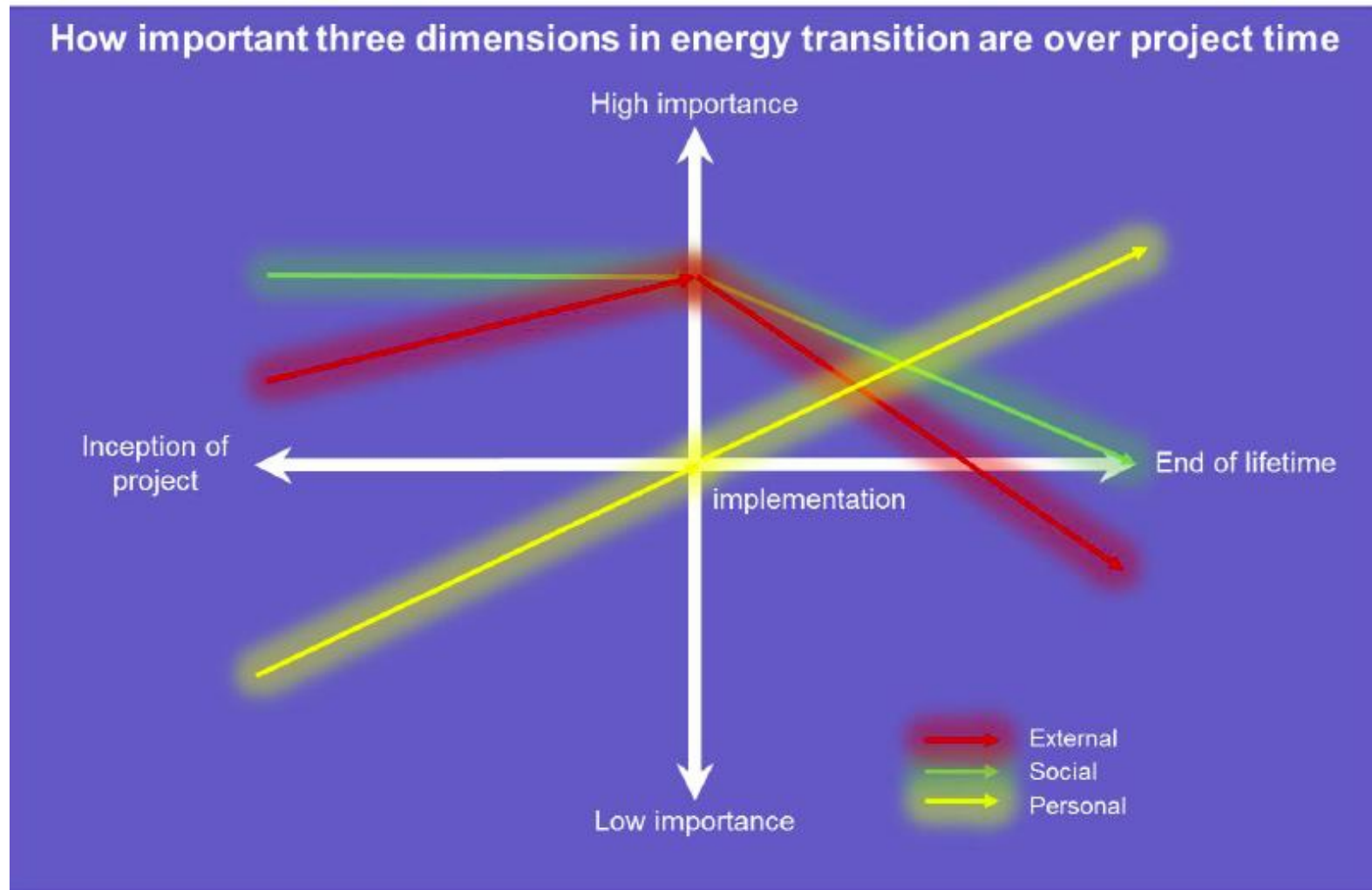
---

- ▶ The set up of energy production and consumption becomes **more visible to citizens** (citizens gain the ownership of energy production; spread of new technical skills; activation of social networks).
- ▶ The energy issue becomes a **direct interest of citizens** who actively participate in the regulation, orientation, management (also in economic terms) and monitoring of measures and policies of energy transition.
- ▶ There is a strong personal effort on the energy transition through an intense **emotional involvement**; a highest attention to several aspects of everyday life (food, waste collection, energy consumption, body care and health); an increased use of physical effort in the field of mobility.



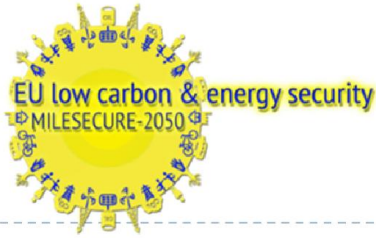


## Relevance of E-S-P factors over time



Next steps in project activities

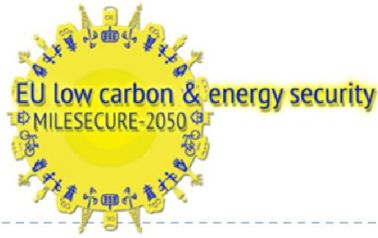
---



## Scenarios assessment, taking into account social energy

---

- ▶ SMET (Socio Metric Energy Transition ) model, developed by Institute of Power Engineering and EnerSys assessed different scenarios on a **national level** in 3 focus MS (Poland, Germany and Italy).
- ▶ IMACLIM-R model, developed by Humans Science and applied mathematic Society (SMASH), will asses those scenarios from a **Macro Regional** point of view (EU 28 MS).
- ▶ **Manifesto for a governance of energy transition and Policy guidelines** will be developed by University of Maastricht and Politecnico di Torino, based on findings of the overall project.



# Thank You!

► For further information:

[www.milesecure2050.eu](http://www.milesecure2050.eu)

[milesecure2050@polito.it](mailto:milesecure2050@polito.it)

