MILESECURE-2050

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

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EU low carbon & energy security

At a Glance

Acronym: MILESECURE-2050

Title:

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

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Welcome to the first issue of the MILESECURE-2050 e-Newsletter

MILESECURE-2050 is a FP7 <u>SSH.2012.2.2-2</u> project funded by the European Commission. It 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 (2050), reduce the threat of climate change, and diminish the risk of an energy gap in the coming decades.

MILESECURE-2050 examines scenarios using multiple perspectives which extend to 2050. By doing so, the project will evaluate policy initiatives and their long-term impact on energy security. The 2050 timeframe is used to assess the legitimacy and efficacy of policies in terms of the capacity for societies to transition to energy security and also to consider the long-term socio-economic impact of such options.

This will be achieved by a comprehensive analysis of the barriers to more sustainable and secure consumer behaviour towards energy consumption based on surveys and field studies. This in turn will lead to suggestions on the formulation of new policies.

The e-Newsletter is a source of periodical information about MILESECURE-2050 and disseminates project results, energy related events and ongoing research activities.

The main objectives of the MILESECURE-2050 project are:

- 1. Analysis of policies, trends and existing scenarios from the national to the worldwide level upon energy security and energy transition
- 2. Evaluation of concrete anticipatory experiences on energy transition at the local level
- 3. Identification of both the options and factors influencing the energy transition processes and its societal effects
- 4. Development and testing of multidimensional models of interrelations between energy transition processes factors and social/individual consumers behaviours
- 5. Elaboration of a scheme for improving the governance of energy transition processes
- 6. Development of a European policy guidelines and recommendations
- 7. Raising awareness, promotion and dissemination of results and findings

Funded under Socio-economic Sciences & Humanities

Upcoming Events

Project events

July 16-17, 2013 <u>PMC Meeting</u>, Warsaw (Poland)

The first MILESECURE-2050 PMC meeting will be held in Warsaw on 16th-17th July 2013. The meeting will be hosted by the Institute of Power Engineering (IEn). It is an opportunity for presenting the completed work and discussing about collective energy transition.

Energy related events

July 4-7, 2013 <u>ECSEE2013, The European</u> <u>Conference on Sustainability,</u> <u>Energy and the Environment</u> Brighton (England)

"Sustainability, Society and the Environment: Searching for Synergies". ECSEE 2013 addresses the various dimensions of human sustainability and search for synergies and solutions to the complex issues surrounding it.

July 15-19, 2013 <u>Joint AESOP/ACSP Congress</u> Dublin (Ireland)

The Congress focuses on resilience which has become a new banner for various societal and related planning efforts in cities and regions across the globe.

August 18-21, 2013 <u>13th European IAEE</u> <u>Conference</u> Düsseldorf (Germany)

"Energy Economics of Phasing out Carbon and Uranium". The Conference offers the opportunity to discuss the increase of renewable electricity generation capacities in Europe and analyze the policy and its economic, ecological and social implications from an energy economics perspective.

Towards a Low Carbon Energy Strategy

The energy landscape of Europe

MILESECURE-2050 takes the position that energy challenges, and therefore energy security and energy transition options, vary across European countries and regions. These differences in energy challenges are significantly influenced by factors such as national choices regarding energy mix, including policy, energy infrastructures, energy market characteristics, technology and innovations, environmental sustainability, energy consumption, energy efficiency and availability of renewable energy sources. While these characteristics are broad and allow for a number of groups to be defined, three distinct regions can be identified. First, peripheral regions located mainly in Eastern and Southern Member States are recognised as particularly vulnerable to energy security challenges due to energy supply characteristics, energy efficiency of the economy, and environmental sustainability. However, there are many variations, for example Poland, which has a relatively secure energy supply but a significant ecological footprint due to coal use. The second region is Central European countries such as Belgium and Germany, which have a high level of energy efficiency, but also have high household energy consumption and relatively low levels of sustainability. The final group is considered to have the most capacity to adapt to energy challenges and is made up of Northern and Western European countries (Netherlands, Finland, Sweden, and the UK) which have significant energy resources and relatively low levels of greenhouse gas emissions due to less dependency on fossil fuels.

Societies in transition

Behavioural and social sciences study social, cognitive and emotional factors to understand the decisions of individuals, the functioning of societies and what makes them change (i.e. transition). Individuals and societies are influenced by a complex and dynamic range of factors. For example, individuals are influenced by emotions, habits, by the behaviour of those around them and structural factors such as transport infrastructure. Societies, on the other hand, are influenced by technological, political, economic, environmental, lifestyle, and cultural factors as well as the interrelation between them and the sum of individuals which making up society. In the context of MILESECURE-2050, relevant disciplines which will be drawn on for scientific knowledge include behavioural economics, ecological economics, environmental psychology, social psychology, sociology, economic and political geography, transition management and practice theory.

Looking at societal transitions in regard to energy, different perspectives on the process that a society undergoes are used to view key areas of potential focus. These include:

Technological perspective – Viewing energy transition as a process of technology transfer, centred on the enhancement of sustainable energy technologies (e.g. energy efficiency, renewable energies) within a particular national or local context.

Political perspective – Observing the political processes involved in societal transition, including all dynamics such as decision-making, adoption of political standards, fund raising and management, or power relations between political and administrative levels.

Geopolitical perspective – Viewing how transition towards a low carbon society affects external and internal relationships between European Union and other macro-regions (Caspian, Middle East, Northern Africa, Far East) and which new spatial and scalar alliances are fostered by large-scale projects of renewable energy and efficiency (such as Mediterranean Solar Plan and Desertec).

Economic perspective – Looking at the economic factors which influence societal transition, such as optional level of prices, taxes, subsidies, resources availability and efficiency, external costs, unemployment, immigration, market stability, protection of vulnerable population, but also considering levels of life satisfaction and welfare of European citizens and the enhancement of competitiveness of European companies.

Environmental perspective – Observing the environmental factors which influence societal transitions, including how a society perceives the environmental impacts of energy use and a low carbon strategy.

Lifestyle and cultural perspective – Viewing lifestyle and culture influences on societal transitions (social norms, societal priorities, customs, cultural needs, etc.).

August 22-25, 2013 <u>50th Societas Ethica Annual</u> <u>Conference - Climate Change,</u> <u>Sustainability and an Ethics of</u> <u>an Open Future</u> Soesterberg (Netherlands)

Sustainability is a goal worth striving for. How the changes necessary to achieve this goal will affect our political institutions, our social relationships, our moral responsibilities, and our selfunderstanding in general?

September 09-11, 2013 Asia Pacific Clean Energy Summit and Expo Honolulu (Hawai'i)

Jointly held with the 2013 Islands & Isolated Communities Congress, this Event is the preeminent meeting place for international leaders and energy experts at the forefront of the clean energy movement.

September 09-11, 2013 ICCE 2013: International Conference & Exhibition on Clean Energy Ottawa (Canada)

The aim of ICCE 2013 is to gather researchers, scientists, engineers, practitioners, policy makers, from all over the world to present advances in the clean energy technologies.

September 22-27, 2013 8th Conference on Sustainable Development of Energy, Water and Environment Systems – SDEWES Dubroumile (Croatic)

Dubrovnik (Croatia)

The Conference is dedicated to the improvement and dissemination of knowledge on methods, policies and technologies for increasing the sustainability of development by de-coupling growth from natural resources and replacing them with knowledge based economy.

MILESECURE-2050 Consortium



The MILESECURE-2050 project is coordinated by **Politecnico di Torino** (POLITO), Italy which represents a leading international public research university in technical-scientific teaching and research. The coordinating person is **Prof. Patrizia Lombardi** (BSc, MSc, PhD), full professor in planning evaluation and environmental economics and Head of Interuniversity Department of Urban and Regional Studies & Planning (DIST).

Patrizia Lombardi, Milesecure-2050 Coordinator

The <u>Consortium</u> is formed by 4 Universities, 4 Research institutes and 3 SMEs, corresponding to 11 European Partners, as follows:

- Politecnico di Torino <u>POLITO</u>, Interuniversity Department of Urban and Regional Studies & Planning (<u>DIST</u>); ITALY <u>http://www.polito.it/</u>
- Universiteit Maastricht <u>MUSTS</u>; NETHERLANDS <u>http://www.maastrichtsts.nl/</u>
- Paris-Lodron Universität Salzburg <u>PLUS</u>, Department of Geoinformatics (Z_GIS); AUSTRIA <u>http://www.zgis.at/index.php/en/</u>
- The University of Salford <u>USAL</u>; UNITED KINGDOM <u>http://www.salford.ac.uk/</u>
- Instytut Energetyki <u>IEn</u>, Energy Research Integration Centre (<u>CENERG</u>); POLAND <u>http://www.ien.com.pl/home</u>
- Laboratorio di Scienze della Cittadinanza <u>LSC</u>; ITALY <u>http://www.scienzecittadinanza.org/</u>
- Agenzia Nazionale per le Nuove Tecnologie, l'Energia e lo Sviluppo Economico Sostenibile - <u>ENEA</u>, Research and Strategy Central Unit (<u>UCSTUDI</u>); ITALY <u>http://www.enea.it/it</u>
- European Commission, Joint Research Centre <u>JRC</u>, Institute for Energy and Transport (<u>IET</u>); BELGIUM <u>http://iet.jrc.ec.europa.eu/</u>
- Ecologic Institute ECOLOGIC; GERMANY http://www.ecologic.eu/
- Société de Mathématiques Appliqués et de Sciences Humaines <u>SMASH</u>; FRANCE <u>http://www.smash.fr/</u>
- Badania Systemowe EnergSys Spzoo <u>EnergSys</u>; POLAND <u>http://www.energsys.com.pl/</u>

External Advisory Board

The activity of the <u>External Advisory Board</u> assures the effective liaison with scientific community, public authorities and industry. The Board consists of five world-wide known scientists coming from experienced universities and research centres.

Kick-off Meeting

In February 2013, the Consortium members met in Turin, Italy, at the Politecnico University offices and officially launched the MILESECURE-2050 project. The purpose of the <u>kick-off</u> meeting was to bring all the partners together, introduce one by one all the different research activities and carry out a fine-tuning of the MILESECURE-2050 objectives and methodology.

A systemic perspective was presented to demonstrate the complexity of the definition of energy security and the challenges that affect security in a low-carbon energy system. The energy transition towards a low carbon economy and society was described as a process by nature that it is not only the mere result of intentional actions but the product of the interaction of multiple intended and unintended elements, a "societal process".

Dr. Domenico Rossetti di Valdalbero, the European Commission Scientific Officer, also participated in the kick-off meeting and introduced the European Union energy strategy and low carbon emissions goals. He also reflected on future consumption patterns within the EU and focused on the need of renewable energy, smarter infrastructure and measures on energy efficiency.

November 4-5, 2013 <u>Conference STS Perspectives</u> <u>on Energy</u> Lisbon (Portugal)

Energy issues are both a pressing matter in contemporary societies and the subject of a rising body of academic work, none the least in the field of science and technology studies. The Conference is dedicated to abstracts and discussions on issues pertaining STS approaches on energy.

December 4-5, 2013 <u>Annual Polis Conference -</u> <u>Innovation in Transport for</u> <u>Sustainable Cities and Regions</u> Brussels (Belgium)

The Conference is an excellent opportunity for cities and regions to showcase transport achievements to a large audience. For the wider transport community, the Conference allows to engage with representatives of city and regional authorities on innovative transport solutions.

Recent developments

During the first six months of the project, specific research activities and dissemination strategies have been carried out. A "Report on key methodological approaches in multidimensional analysis" has been developed in the context of the **Analysis of energy security policies, trends and existing scenarios from the national to the worldwide level** (Work Package 1).

For effectively assessing energy system security in a rigorous and transparent manner, a twofold analysis has been carried out. On the one hand, researchers have referred to key existing scientific literature; on the other hand, they have identified a theoretical framework able to study the different societal dimensions characterising energy transition towards a post carbon society and energy security. At this stage, the research is mainly focusing on macro-regional, national and global scales.

Key indicators and conceptual frameworks have been defined in order to explore:

- the historical evolution of energy policies at the global and European scales, by taking a EU-centred perspective and focusing mostly on the external dimension of energy policy in terms of security of supply and international cooperation issues;
- the ongoing evolution of international debates concerning energy security and transition (including questions of resilience, adaptation to and mitigation of climate change) both among policy makers and within the scientific community.

Among the **Promotion**, **dissemination** and **networking** (<u>Work Package 6</u>), MILESECURE-2050 partners have issued a "Dissemination plan" identifying the different audiences to address and the tools to be used to enhance the public awareness of energy security related issues.

An informative website has been developed and activated. The public website provides information about the project and serves as online platform for sharing documents and networking among the scientific communities and stakeholders. Visit it on <u>www.milesecure2050.eu</u>

Contact: info@milesecure2050.eu Website: www.milesecure2050.eu

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