

MILESECURE-2050

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

e-Newsletter No. 6, December 2015

Table of contents

At a Glance – Welcome

A **manifesto** for human-based governance of secure and low-carbon energy transition

Guidelines and recommendations for European policies

Final Policy brief

MILESECURE-2050 **Special sessions**

MILESECURE-2050 **International Seminar**

Scientific publication of project results

Upcoming Events - Energy related events



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 sixth issue of MILESECURE-2050 e-Newsletter

MILESECURE-2050 is a FP7 project funded by the European Commission. Its aim is 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 has examined scenarios using multiple perspectives which extend to 2050. The project has evaluated 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 is the final MILESECURE-2050 project newsletter. It illustrates final activities of the project, related to the following Work Packages: [WP5](#): Towards a governance of the energy transition processes and [WP6](#) - communication and dissemination. In particular, it describes:

- the Manifesto for human-based governance of secure and low-carbon energy transition
- the recommendations and guidelines for policy making
- the last Policy brief n.4
- the two special sessions during AESOP (Prague) and 3rd International Symposium on Energy Challenges and Mechanics (Aberdeen) international conferences
- the final seminar of the project in Brussels
- a scientific publication of the project results.

MILESECURE-2050 Consortium

The [Consortium](#) is formed by 4 Universities, 4 Research institutes and 3 SMEs, corresponding to 11 European Partners, as follows:

[POLITO](#) – Italy
[MUSTS](#) – The Netherlands
[PLUS](#) – Austria
[USAL](#) – United Kingdom
[IEn](#) – Poland
[LSC](#) – Italy
[ENEA](#) – Italy
[JRC](#) – Belgium
[ECOLOGIC](#) – Germany
[SMASH](#) – France
[EnergSys](#) – Poland

Energy related events

18-19 February 2016
Sustainable Built Environment 2016 (SBE16)
Towards Post-Carbon Cities
Turin, Italy

The Conference is organized by Politecnico di Torino and iiSBE Italia, in collaboration with the City of Torino. SBE16 Torino belongs to the [Sustainable Built Environment regional conference series](#), leading towards the world Conference SBE17 Hong Kong.

The objective of SBE16 Torino is to present new paradigms in the shift towards post-carbon cities, bringing together diverse experiences and perspectives, exchanged in a friendly workshop with a rigorous scientific approach.

MILESECURE-2050 partners will participate in the SBE16 with the aim of disseminating the main project results and reach out a wide audience.

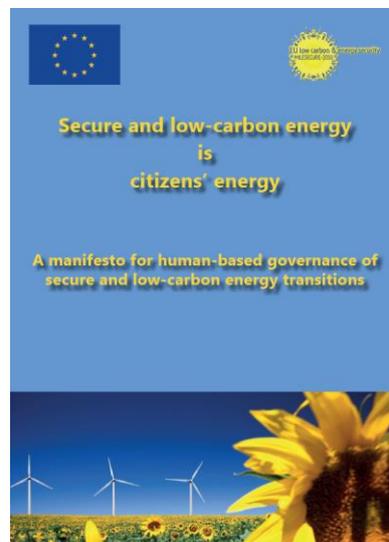
Transition toward “post-carbon city” imposes new paradigms in the policy makers agenda. It requires a burst in the carbon-dependency of our urban systems, which has led to current

A manifesto for human-based governance of secure and low-carbon energy transition in WP5

“**Secure and low-carbon energy is citizens’ energy**” - a [manifesto](#) for human-based governance of secure and low-carbon energy transition was published in the final stage of the project. MILESECURE-2050 project produced a clear statement on how governance can accommodate transition to a low-carbon and secure energy system. As such transition are all-encompassing and pervasive, and as carbon reduction and energy security are themselves highly heterogeneous and multifaceted values, such transition are complex processes. This complexity is reflected in the MILESECURE-2050 project consortium composition from a wide range of disciplines that each solves part of the puzzle of energy transition. Similarly, it is impossible for one single style of governance to accomplish such complex processes. Thus, the challenge facing the manifesto is twofold: knowledge from multiple disciplines has to be brought together, and this knowledge must be manipulated to address a wide range governance modes.

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 to a reliance on renewable energy sources. The challenges call for energy transition: changes that concern entire energy systems, not just some of their parts. These changes are structural, as they modify the way energy provision is organized at the level of society. They are radical, since they may demand to abandon existing technologies even if they are not yet obsolete. The changes are fundamental, because they require that we start thinking in novel ways about energy, its provision, and how a good and fair society is organized around energy.

Transitions do not only pose technological challenges, but involve enormous social, political and economic changes as well. Changes concern market relations, social and institutional roles and responsibilities, and the emergence of new actors. Most policy documents and future visions focus on economic, geopolitical and technological changes. Insofar as social processes are concerned, they are discussed at an aggregate and undifferentiated way: as a human factor, which is at best the receiver of policies and economic transactions, and at worst a residual category containing the overflows of economic and technological interventions. However, the human factor deserves more substantive attention: much more light is to be shed on people and the many roles they take. People are an important resource of relevant knowledge. Because of the far-reaching consequences of energy transition, it is vital to make use of the widest possible range of knowledge: not only technological and scientific expertise, but also local, practical and even tacit knowledge, knowledge created by civil society, and anticipatory perspectives on how society should be organized. First, this wide range of knowledge is needed to identify problems and threats to a secure and low-carbon energy provision. Second, it is needed to project and implement necessary changes. And third, it is needed to anticipate the wider consequences of energy transition.



high levels of greenhouse gases. There is the need for the establishment of new types of cities that are low-carbon as well as environmentally, socially and economically sustainable. In the current transition, new uncertainties and vulnerabilities of cities are emerging, that require a holistic evaluation approach and new integrated collaborative methods and tools with the aim at assisting urban planners, built environment stakeholders and policy makers in their efforts to plan, design and manage post-carbon cities.

To better understand the current situation, the conference "Toward Post-Carbon Cities" will cover several specific themes:

- strategies for sustainable urban development;
- sustainable university campus;
- methods and tools for assessment;
- decision making methods and tools at urban scale;
- policies and regulations for a sustainable built environment;
- training and education;
- sustainable urban districts retrofitting;
- sustainable districts: case studies.

The Plenary Session will be in the form of an open debate between excellence scientist and thinkers coming from different fields (architecture, biology, physics, etc.) on sustainable cities.

Some other event will take place parallel to the conference:

- Sprint Workshop: Assessment harmonization in Europe at building and urban scale
- FASUDIR project Workshop: Tools for friendly sustainable urban districts retrofitting

Guidelines and recommendations for European policies

The recent report presents the main activities developed in [Task 5.2](#) consisting in the development of guidelines and recommendations for European policies. These results aim at supporting inclusive and sustainable societies in and outside Europe, as well as long-term strategies for security of energy supply and related concerns.

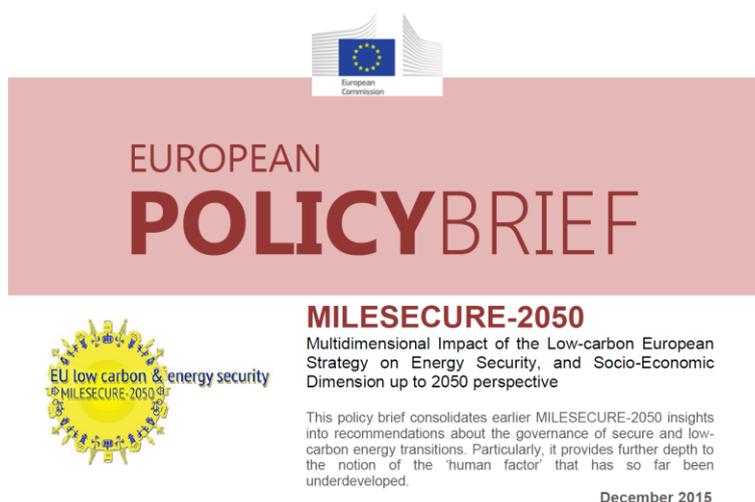
The MILESECURE-2050 research project highlighted both the need to achieve a better harmonisation of policies at different scale level and a major focus on human factor in the EU policy-making process both as policy inspiration and as policy target.

The MILESECURE 2050 project guidelines presented in this deliverable aim at triggering the potentials of the human factor towards the enforcement of a societal transition as derived from the SET scenario, which demonstrates that mobilizing human factors into innovative local initiatives and changes in lifestyles are necessary to achieve a low carbon transition.

These guidelines and recommendations are classified as: extra-European, intra-European and local, considering that different territorial level of policy and regulations implies different approaches. The first level addresses EU decision and policy-makers actions within the broader world context. The second one aims at inspiring policymakers when they deal with EU internal energy issues as a supra-national organization composed of 28 Member States. The third one focuses on the local dimension, inspiring effective EU policies to maximise and activate the human factor.

Final Policy Brief

The final MILESECURE-2050 [Policy Brief on governance of energy transition processes](#) consolidates earlier MILESECURE-2050 insights into recommendations about the governance of secure and low-carbon energy transition. Particularly, it provides further depth to the notion of the 'human factor' that has been so far underdeveloped.



The MILESECURE-2050 project has studied over 90 implementations of low-carbon and secure energy transitions in a multidisciplinary perspective. These initiatives show at once the tremendous potential that exists among European citizens to address challenges of energy transition, and the difficulties facing the same citizens because of restricting and disempowering regulations. This poor alignment between social practices and the regulations imposed by governments needs to be addressed as a matter of urgency. The present research points out three basic avenues for improvement:

16 – 18 March 2016

IEECB&SC'16

**9th International Conference:
Improving Energy Efficiency in
Commercial Buildings and
Smart Communities
Frankfurt, Germany**

The IEECB&SC'16 conference will take place on 16-18 March 2016 in Frankfurt during Light+Building, the world's leading trade fair for Architecture and Technology, 13-18 March 2016, in Frankfurt, Germany. Light+Building integrates the sectors related to building design – light, electrical engineering as well as home and building automation – at one trade fair. Integrated planning approaches and systems-linking interaction of various technical trades are no longer just a vision but a growing reality. Light+Building does justice to this with its unique international scope by presenting the subject in its entire breadth and depth. From investors to architects and engineers, up to specialist planners, process workers and operators, Light+Building is the number one industry event in 2016 for all experts involved in the conception, planning and management of buildings.

The IEECB&SC conference seeks to bring together all the key players from this sector, including commercial buildings' investors and property managers, academia, building technologies researchers, equipment manufacturers, service providers (ESCOs, utilities, facilities management companies), urban planner and policy makers, with a view to exchange information, to learn from each other and to network.

The wide scope of topics covered during the IEECB&SC'16 conference includes: smart building and low energy buildings, (Nearly) Net Zero Energy Buildings, equipment and systems (lighting, HVAC auxiliary equipment, ICT & office

- citizens should be explicitly mobilized as sources of knowledge;
- citizens should be provided with a sense of urgency and a feeling of empowerment;
- citizens should be provided with information in a way that positions them as owners of energy problems and challenges.

After the analysis, some key findings have been identified:

- The role of citizens and communities has been poorly understood. Consequently, people have been insufficiently enrolled, engaged and mobilized as a resource for innovation and change in low-carbon and secure energy transition.
- Policy should be much more aimed at empowering citizens, communities and societal organizations to develop locally-adapted strategies.
- At the same time, top-down approaches need not be abandoned per se, but instead synergies between central and local initiatives should be pursued.
- Current implementations of national and European policies sometimes work counter to the potential of people, and disproportionately emphasize economic and technological arguments. Politics and policy making must be more receptive to knowledge and insights from citizens, in order to realize the potential that is now left unmined.
- Investments need to be made in novel ways: investments in the enrolment and activation of citizens and the emancipation of unprivileged groups, investments into a general receptivity for locally created knowledge, and investments into a socio-technical infrastructure that enables experimentation.

The final policy brief highlights the governance-relevant aspects of the consolidated findings of all MILESECURE-2050 partners, formulating key policy recommendations:

Getting knowledge from the public

- It is widely accepted that energy transition, just as much as other important societal changes, cannot proceed without involving the public. However, this seldom transcends the level of mere information distribution into a level of meaningful public discourse. First, the information provided is often not enough to get a full population endorse a certain project. And second, this only taps into a small portion of the knowledge capital that is actually available.
- Therefore, it is recommended that involving the public is more explicitly geared towards exchanging perspectives and problem definitions, rather than the more superficial exercise of asking citizens to assess policy options against their preferences. Only when it is properly understood how people understand and define problems and challenges, does it become possible to mobilize this knowledge. Only then will the full range of options for action become visible.

Top-down approaches

- Top-down approaches must be supportive of local initiative, rather than straightforwardly implementing command-and-control style directives. Since local knowledge is of vital importance for the achievement of sustainability goals, top-down governance must be aimed at incorporating such local knowledge instead of overruling it. Additionally, local knowledge is not a ready-made resource that can be availed to government planners, but something that can only emerge and circulate if local actors are enrolled and taken seriously into decision-making and implementation processes.
- This all means that while top-down approaches are not to be abandoned categorically, they must be critically assessed and arranged such that they become in fact bidirectional forms of communication instead of the classic unidirectional lines of instruction. It is nontrivial how the accommodation of local initiatives, the mobilization of local knowledge and the harvesting of otherwise relevant knowledge outside formal institutions should take place. Therefore, centrally issued policies should be at the same time adaptable to different contexts, and geared towards learning and to incorporating new forms of knowledge. Top-down strategies should seek to incorporate ambiguities, rather than hammer out clear answers.

equipment, miscellaneous equipment, BEMS, electricity on-site production, renewable energies, etc.), smart and sustainable communities and the latest advances in energy efficiency programmes, regulation & policies for commercial buildings and smart communities.

In particular the conference aims to attract property investors, architects, and urban planners to present and discuss synergies and cooperation in removing existing barriers to energy efficiency and smart buildings, as well as the importance of public buildings as showcase example for energy efficiency solutions and practices.

The IE ECB&SC conference aims at attracting high level papers presenting new technologies, techniques, services, policies, programmes and strategies to increase energy efficiency, energy savings and to reduce greenhouse gases emissions in non-residential buildings and communities.

3-8 July 2016

IV World Planning Schools Congress

Rio de Janeiro, Brazil

**"Global Crisis, Planning & Challenges to Spatial Justice in The North and In The South"
AESOP Annual Congress**

The initiative to organize World Planning School Congresses came up with the formation of a global network by national and regional associations of planning schools and institutes around the world in 2001. Since then this network, the GLOBAL PLANNING EDUCATION NETWORK - GPEAN, assigns the organization of each World Congress to one or more schools of one of its members. As responsible for the 4th edition of WPSC, the GPEAN designated the Institute of Urban and Regional Research and Planning - IPPUR - at the Federal University of Rio de Janeiro - UFRJ -, a member of the

Bottom-up approaches

- Local actors must develop initiatives, and they need to be enabled to do so. Local actors are the most important holders of knowledge regarding energy challenges at the level of neighbourhoods and households, and therefore it should be both their responsibility and their right to develop innovations. These initiatives should not replace central directives, but should be arranged to be complementary. These initiatives may include calls towards central governors to cater to the particular needs and constraints of local initiatives. Central governments must be receptive to such calls.
- This focus on bottom-up approaches is not about just letting citizens do the work that Brussels should actually be doing. But decarbonisation and secure energy transition require empowering and educating people. Only if people are able to engage with problems, they will act. An important question in governance should be how local successes can be scaled up to the national and European levels. Not only is this a matter of capitalizing upon what is locally invented, it is also about bringing out innovations that are more credible as examples than are theoretically devised solutions made up by central institutions of expertise.

Quality of governance

- Visionary leadership is needed to keep track of the overall direction of energy transition. At the same time, strategies must be open-ended and foster processes of continuous learning, negotiation and adaptation, and leave room for innovation at the local level and offer methods for transfer of innovation across regions and contexts.
- European strategies towards secure and low-carbon energy must maximize synergy between local initiatives and central government, between top-down and bottom-up approaches, and between technological and economic approaches and citizen-centred perspectives.

Saving public money

Governance processes should be better geared towards inclusion of the public, and reception of the public's perspectives and problem definitions. This leads to cost reduction in at least the following ways.

- First, solutions will be better adapted to the social contexts in which they matter. Social resistance or even failure is less likely to occur if citizens are better enrolled, and chances are lower that valuable resources are wasted.
- Second, some of the knowledge gaps filled in through consultation of the public might pre-empt expensive expertise.
- Third, if the public is included and enrolled better, it will also better be able to take control and agency. If it is better enabled to develop initiatives, part of the effort to be made for energy transition is already taking place without burdening governments.

MILESECURE-2050 Special Sessions

Aberdeen – 3rd International Symposium on Energy Challenges and Mechanics 07-09 July 2015

The 3rd International Symposium on Energy Challenges and Mechanics (ECM3) was about energy challenges, the underlying energetic basis (mechanics) for society, involving multiple disciplines in technology, science, management and policy-making. The topics included both fossil fuels and many different forms of renewable energy. In addition, the Conference was a chance to discuss issues related to energy efficiency, safety, environment and ecology.

The Programme was organized into 21 Parallel sessions.

Session 12 entitled "FUTURE EUROPE" was chaired by Coordinator Professor P. Lombardi and devoted to the MILESECURE-2050 project. The FUTURE EUROPE session was devoted to the discussion on the following themes:

Brazilian Association of Research and Graduate Studies in Urban and Regional Planning – ANPUR.

5-9 September 2016
Urban Transitions Global Summit 2016
Shanghai, China
“Towards a better urban future in an interconnected age”

Cities are incredibly vibrant centres of innovation, education, employment and commerce. They are the heart of the modern global economy and as such they continue to attract rural migrants seeking a better quality of life for themselves and their families. Today, more than half of the world population lives in urban areas, and each week, the urban population increases globally by 1.3 million.

As we become a mainly urban species, we have significant challenges and exciting opportunities ahead of us, as we try to transition towards more:

Economically competitive urban futures
Sustainable and resilient urban futures
Equitable and inclusive urban societies
Digitally supported urban futures
Contributions for workshop proposal and oral and poster presentations are invited on each of these themes by the following deadlines:

Workshop proposals:
20 January 2016
Oral and poster abstracts:
3 March 2016

- Exploring low carbon transition theories and strategies in connection with energy security concept, considering environmental objectives alongside geopolitical and economic interests.
- Reviewing and expanding current approaches used to understand and explain possible modes for societal energy transition, taking multiple interrelated and co-evolving perspectives (environmental, geopolitical, lifestyle and cultural, political, technological, economic and combined).
- Discussing problems concerning energy in a global scenario, proposing quantitative assessments of energy security scenarios for Europe and evaluations of geopolitical tensions between different areas in the world.
- Presenting case studies on energy transition, future scenarios and potential regional and macro-regional conflicts.

On the 8th of July 2015 Prof Lombardi (POLITO) was selected as Principal Lecturer for the Plenary session in the morning. On that occasion, Professor Lombardi delivered a 40 minute Key presentation entitled “Toward Post Carbon Cities” and attendees were involved in a discussion on the role played by cities in implementing new energy technologies and in controlling the key levers to a successful transition to a post carbon society, including land and urban planning, public transport, social housing, hazard protection and water systems, green areas, urban heating, local mobility management and taxation.



Prague - 2015 AESOP Congress, 13-16 July 2015

The 2015 AESOP Congress Organising Committee has invited MILESECURE expert Giancarlo Cotella (POLITO) as co-chair for the Track 09 "Energy and Space as Resources / Limits for Planning Decisions".

On the occasion of the 2015 AESOP Congress, 7-9 July 2015, two papers presenting MILESECURE-2050 main results were submitted.

Session 4, Track 9 "Unpacking the governance of energy transition. A conceptual framework" by Valkenburg Govert (MUSTS) and "Energy security scenarios of future Europe. Assessing the impacts of societal processes" by Cassen Christophe (SMASH). Information about the Congress may be found at <http://www.aesop2015.eu/>.

MILESECURE-2050 International Seminar in Brussels

MILESECURE-2050 INTERNATIONAL SEMINAR "THE HUMAN FACTOR IN ENERGY TRANSITION & SECURITY TOWARDS 2050" - Multidimensional Knowledge, Innovative Models, Effective Policies – was organised in Brussels on the 15th of December 2015.



The context for the organisation of the Seminar was connected with the fact that reduced emissions, increased use of renewable energy and energy saving are the key environmental objectives that Europe has embedded in its strategy for 2020 and beyond to face the challenges of climate change and energy security. But changing energy systems has social, cultural, economic, political, geopolitical, and lifestyle implications that risk to be underestimated by traditional and strictly disciplinary studies. In order to acquire a more comprehensive knowledge on the process of Energy transition, DG Research funded under the FP7 the MILESECURE-2050 Project. The project carried out a research that combined in a single frame a large set of theories and methodology.

At a first stage the project conducted two different studies: (i) a study of the main trends and policies related to the international and European context; and (ii) an analysis of a set of 90 European anticipatory experiences of a low carbon society (i.e. local experiences that could be considered as already existing pieces of a future low carbon society) was conducted directly on field. After that the project team worked to fulfil one of the main tasks of the project: to embody the knowledge coming from these two studies into innovative forecasting models and scenarios.

At the later stage, on the basis of the forecasting exercise, policy guidelines and a manifesto on the transition were drafted. Both model & scenarios and policy guidelines are aimed to provide indications for European policy making at different levels: from local to European scale. The common element of the itinerary as a whole was the attempt to put the human factor at the centre of the Energy transition process.

The seminar was devoted to discuss the final results of the MILESECURE-2050 project and focused on the three key issues:

- Multidimensional Knowledge
- Innovative Models
- Effective Policies

For each one of these themes a paper highlighting the results of the project was presented and a dedicated working session was organised to discuss the results. After the working session a Round table discussed the results of the project with European experts and policy makers.

Scientific publication of project results

MILESECURE-2050 results are going to be published by ELSEVIER in a book entitled: Low-carbon Energy Security from a European Perspective, edited by Patrizia Lombardi (POLITO) and Max Grünig (ECOLOGIC). A foreword is kindly provided by dr Domenico Rossetti di Valdalbero.

The authors are the MILESECURE-2050 partner team, and the list of chapters is as follows:

1. Challenging the energy security paradigm. An Introduction (M. Grünig, P. Lombardi)
2. European Union energy policy evolutionary patterns (G.Cotella, S.Crivello, M. Karatayev)
3. Energy supply prompting new military, political, and economic campaigns: A study of Russia as key natural gas supplier to Europe in terms of security of supply and market power (A.Prahl and F.Weingartner)
4. Towards a new energy world order: energy in an international scenario (G.Cotella and S.Crivello)
5. Reshaping equilibria: renewable energy mega-projects and energy security (Max Gruenig, Brendan O'Donnell)
6. European distributed renewable energy case studies (G.Quinti, G.Caiati, M.Grünig, B.O'Donnel, B.Felici, F.Baldissara, O.Amerighi)
7. Energy security in low carbon pathways (C.Cassen & F.Gracevea)
8. Towards governance of energy security (G. Valkenburg and F. Gracevea)
9. Reducing uncertainty through a systemic risk-management approach (F. Gracevea, G.Valkenburg, P. Zeniewski)
10. Towards a low carbon citizens driven energy security European agenda (P.Lombardi, B.O'Donnell)

This is the last issue of MILESECURE-2050 e-Newsletter. The [project website](#) will be still active after the end of the year, gathering all relevant information, documents and project results. To subscribe for the e-Newsletter click [here](#)

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