



# Public Engagement Innovations for Horizon 2020

## Empowering young researchers on PE in energy efficiency



Written and reviewed by:  
Luciano d'Andrea  
Giovanni Caiati

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UNIVERSITY OF HELSINKI

UH

University of Helsinki, Finland



VU IBS

Vilnius University International Business School,  
Lithuania



LSC

Laboratorio di Scienze della Cittadinanza, Italy



University of Lapland, Finland

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Contact information: Luciano d'Andrea

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Project co-ordinator: Mikko Rask, Consumer Society Research Centre at the University of Helsinki

E-mail: [mikko.rask@helsinki.fi](mailto:mikko.rask@helsinki.fi)

Project website: [www.PE2020.eu](http://www.PE2020.eu)

## The PE2020 project

PE2020 will identify, analyse and refine innovative public engagement (PE) tools and instruments for dynamic governance in the field of Science in Society (SiS). PE2020 analyses the PE tools and instruments through a systemic and contextual perspective, and contributes to the potential and transferability of new governance innovations. PE2020 will create new knowledge of the status quo and trends in the field of public engagement in science, refine innovative PE tools and instruments and propose new ones.

The project will do this by (1) further developing a conceptual model that provides a systemic perspective of the dynamics of public and stakeholder engagement; (2) creating an updated inventory of current and prospective European PE innovations; (3) context-tailoring and piloting best practice PE processes related to the grand challenges of the Horizon 2020 and (4) developing an accessible net-based PE design toolkit that helps identify, evaluate and successfully transfer innovative PE practices among European countries.

New tools and instruments for public and societal engagement are necessary to boost the quality, capacity and legitimacy of European STI governance and to solve the looming problems related to the grand societal challenges of the Horizon 2020. In order to ensure practical relevance, the project will work through intensive co-operation between researchers and science policy actors. PE2020 will expand the capacity of European and national science policy actors to integrate better societal engagement by providing an easy access to new PE tools and instruments, to be included in the requirements and implementation of research in Horizon 2020 and beyond.

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## 1. Introduction

The pilot project "Empowering young researchers on PE in energy efficiency" was developed on the basis of an interaction between LSC and ENEA, the Italian National Agency for New Technologies, Energy and Sustainable Economic Development and was conceived as an itinerary aimed at putting Public Engagement as a strategic element in the training programme of the two-week long ENEA Summer School on Energy Efficiency (ESS) addressed to young professionals and researchers.

To pursue this end, the itinerary included the organization of an internal workshop involving a group of ENEA project managers aimed at developing a common understanding about the ENEA experience in PE, the production of a handout on PE in the energy sector, the organisation of a four-hour training module devoted to PE in the framework of the ESS and the presentation of the results of the module in the ESS final plenary session with the participation of a group of private companies working in the energy sector. The handout was used to support the trainees in their 3-month internship within companies and utilities specialized in energy efficiency.

The rationale of the pilot project was that of supporting the ENEA project managers in capitalizing on their experience for identifying the stock of knowledge to transfer to the ESS trainees on PE theory and practice in the energy sector and then actually implementing such a knowledge transfer process through the training module included in the ESS.

## 2. Methods

### 2.1. Objectives of the pilot project

The pilot project pursued the following objectives:

- Raising the awareness of the ENEA project managers on their own approach to and practices of public engagement in energy projects;
- Transferring a stock of theoretical and practical knowledge to the trainees on why and how to use PE mechanisms in designing and implementing energy efficiency programmes;
- Sensitizing the private companies concerned with the ESS about the role of PE in the field of energy efficiency.

### 2.2. Methods of the pilot

In general terms, the pilot project could be viewed as a consultation process based on two main PE mechanisms, i.e., the expert meeting (involving the ENEA project managers) and the stakeholders dialogue (involving both the trainees and private companies). Evidently, an important part of the pilot project was devoted to the design, implementation and evaluation of the training module devoted to public engagement in the energy efficiency programmes.

Moreover, some other methodological features of the pilot project deserve to be mentioned here.

- Knowledge Management. In the Consultation Workshop with the ENEA project managers, knowledge management techniques (especially that favouring the formalization of the tacit knowledge) were used. In this regard, it is to notice that some of the participants declared to have become aware, thanks to the workshop, about how many PE mechanisms and practices were involved in their own professional activity and, more in general, in the ENEA energy programmes.
- Needs analysis. In the same workshop, an analysis of the need for public engagement in the realm of energy efficiency was also carried out. This analysis concerned the routines and practices of research and innovation in ENEA, but also the approach to be adopted in the ESS training module devoted to PE.
- Participatory training methods. The training module has been organized following the principles of adult education, especially that stating the crucial role played by the direct participation of trainees in their own training process. An effort has been made to frame public engagement into the trainees' knowledge and personal experience, through a discussion challenging their perception of energy efficiency and energy projects.

### 2.3. Context of the pilot

#### 2.3.1. The partner

The pilot project was carried out in partnership with ENEA, the Italian National Agency for New Technologies, Energy and Sustainable Economic Development. ENEA is the most important player in sustainable energy, hosting over 2,700 staff employees, distributed in its 9 research centers all over the national territory. It conducts research and innovation activities, and provides public administrations, enterprises and citizens

with advanced services in support to the transition toward more environmentally sustainable energy solutions. More specifically, ENEA is concerned with energy efficiency, renewable energy sources, and nuclear energy. It hosts experimental laboratories and facilities, and also dedicates its technological innovation skills to cultural heritage conservation, agro-food, health, and the environment

### 2.2.2. The initiative: the ENEA Summer School in Energy Efficiency (ESS)

The "Summer School in Energy Efficiency" is a multi-disciplinary training course annually promoted by ENEA open to 20 young graduates and researchers in technical-scientific and economic areas. The Summer School aims to provide participants with a systemic view of energy efficiency and to facilitate the matching of young graduates with high-profile industrial and institutional partners interested in recruiting young professionals specialised in energy efficiency. The ESS 2015 lasted two weeks and included lectures (in the morning) and training module/laboratory-work (in the afternoon). The ESS also included a 3-month long internship for the trainees in private companies working in the energy sector.

### 2.2.3. Preparation and planning

The preparation and planning of the pilot project is to be framed into the previous relationships established by LSC with ENEA in the context of another European project, titled "MILESECURE 2050". Under this project, a study of over 90 European experiences aimed to promote the transition to a low carbon society was carried out.

MILESECURE 2050 discovered that, in the most advanced European energy transition experiences, there is a clear tendency to go beyond the mere social acceptance of innovative technologies and sustainable solutions by expanding as far as possible citizens' participation and public engagement with at least three different aims:

- Orienting the scientific and technological research, also by posing new research questions;
- Managing the innovation process, especially as regards the implementation of the projects aimed at energy transition;
- Modifying people's lifestyles and behavioural patterns, often associated with the introduction and spread of more sustainable energy technologies.

In this framework, public engagement plays a systemic and structural role. As the results of MILESECURE 2050 clearly highlighted, without effective forms of engagement of end-users, the efforts to promote energy efficiency can be resized in their impacts, ineffective or, in some cases, even counter-productive.

This common research experience favoured an agreement between ENEA and LSC concerning the pilot project, with the common interest to transfer the knowledge generated through MILESECURE 2050 to the participants of the ESS.

## 2.4. Realization of the pilot

The pilot project included the following steps.

#### 2.4.1. Project identification and design phase

A preliminary work was carried out by the project team in order to establish a partnership with ENEA. In this phase, four meetings were held between LSC and ENEA representatives in March and April 2015, leading to the decision of embedding the pilot project in the ENEA Summer School by developing a specific training module devoted to PE in the energy sector. In this framework, a visit to the ENEA training centre (located at around 30 kms from Rome) was organized and a preliminary idea of the pilot project was discussed. The final design of the pilot project was established in May.

#### 2.4.2. Consultation workshop

In order to define the contents of the training module, it was decided to promote a consultation workshop with the participation of a group of ENEA project managers working at La Casaccia ENEA headquarters. A first contact was then established with 15 ENEA project managers in May.

A note was sent them on PE in the energy sector to be used as the Discussion Outline for the Consultation Workshop, which was held on June 15.

The Consultation Workshop pursued three specific aims:

- to collect the participants' opinion on the role and application of public engagement mechanisms and strategies in the context of energy efficiency projects;
- to collect information about the PE experiences of ENEA to be presented in the ESS;
- to collect suggestions for drafting a handout on PE in the energy sector to deliver to the trainees.

The Consultation Workshop involved 12 ENEA project managers in charge of programmes on energy efficiency in Italy and at European level.

#### 2.4.3. Handout

On the basis of the outputs of the Consultation Workshop, a handout on PE in the energy sector was developed. The handout was made up of two parts, respectively devoted to PE in science and technology and to a typology of PE actions and strategies in the energy sector, drawn from a large inventory of energy programmes carried out all over Europe under the MILESECURE 2050 project. The handout was distributed in a digital format to the trainees before the start of the ESS.

#### 2.4.4. Training module

The handout was the basis for developing the training module devoted to PE in the energy sector.

The module included an introduction by the ESS coordinator, the presentation of the handout, and a questions-and-answers time, aimed at:

- favouring the learning process;
- allowing the ENEA project managers to provide examples of PE mechanisms applied in the ENEA energy programmes;
- allowing the trainees to express their point of views about the issues put on the table.



#### 2.4.4. Final plenary session

A final plenary session with the participation of the trainees, the private companies hosting the students during the internship, the teachers and the ENEA project managers was organized the last day of the residential part of the course (July 10<sup>th</sup>). The objective was, on the one side, to present the handout and, on the other side, to discuss PE initiatives to be carried out during the internships.

## 3. Results of the pilot

### 3.1. Impact

The information about the impacts of the pilot project is mainly drawn from the feedbacks given by the concerned actors and, mainly, the partner, the ENEA project managers and the trainees. No clear feedbacks have been given by the managers of the concerned companies.

On the basis of such an information background, the following points can be highlighted.

- The Consultation Workshop had a very good impact, according to participants, since it allowed them, for the first time, to discuss on PE in their professional and research life. This led them to even discover that many of the activities made by the ENEA project managers (for example, negotiations with stakeholders and local authorities, organisation of public meetings with citizens on energy-related issues, dialogue on new low-carbon more efficient technological solutions, etc.) necessarily had much to do with public engagement. Some of the participants even noticed the existence of a sort of tradition within the ENEA in terms of PE approaches and practices, which they were not aware of. The problem is that most of the managers and researchers did not recognise such activities as connected with PE and therefore they showed a limited capacity to manage them purposely.
- According to the ESS coordinator, this lack of awareness is also due to the lack of opportunities and support from the institution to reflect about PE. Actually, PE is not understood as a strategic aspect of innovation policies in the energy sector, mainly because innovation is predominantly viewed mainly or purely as a technological matter. Social variables are still stereotypically interpreted as a marginal component of innovation and resistances to innovation as something destined to automatically disappear once people and stakeholder become fully aware of the advantages deriving from the new technological solutions. The pilot project, even though in a very limited manner, provided an opportunity to show the existence of such an attitude and to deal with as a problem to cope with.
- Ever according to the ESS coordinator, the pilot project was also helpful in showing the need for developing competences related to public engagement, incorporating them in the set of skills of professionals and researchers working in the field of sustainable energy. Presently, there is no place (within or outside the university and the ENEA as well) where such competences are systematically taught or transferred in some ways to professionals and researchers.
- Gathering information about the actual impact of the training module of the trainees was more difficult. Even though most of them expressed their interest and satisfaction about it, we observed the tendency to overlook PE as a core component of the energy efficiency projects. According to the ESS coordinator, however, this fact represents a further motivation for systematically including PE in training courses on energy efficiency.

### 3.2. Advantages

The pilot project succeeded, on the one side, to raise the awareness of the ENEA project managers about the role of PE in their own projects and professional life and, on the other side, to include for the first time public engagement as a subject of courses addressing issues related to sustainable energy.

In particular, the pilot project allowed the same ENEA project managers participating in the Consultation Workshop to perceive and even to provide evidence of the importance of public engagement in energy efficiency policies and research. This contributed in feeding their attention and interest towards the pilot

project, making the work of the team in charge of the pilot project easier. In this perspective, the Consultation was a real participatory event.

Undoubtedly, another advantage of the pilot project was that it developed a three-step scheme – identifying PE practices and approaches in the organization, formalizing them with the support of external expertise (in this case provided by LSC) and transferring them through a training module – which is easy enough to be replicable with limited efforts and resources in many organizational contexts. Moreover, such a scheme allows to develop a “common language” among the participants, based on practical examples and concrete cases, which is particularly effective for feeding a “culture” of PE within the organization.

### 3.3. Obstacles

Some obstacles have been met during the implementation of the pilot project.

- Probably because of their disciplinary background, the trainees met some difficulties in recognizing the relevance of PE in their professional practice. Some trainees made an effort to “translate” the contents of the module into the language and concepts of their own discipline (prevalently engineering and economics), however with some mistakes and simplifications. As said above, it was also observed the tendency to overlook PE as an important issue to cope with in a training course devoted to energy efficiency. Probably more time should have been necessary for appropriately managing such tendencies by developing a language and an approach more familiar to engineers or economists.
- Moreover, also the managers of private companies seemed to be little sensitive to PE-related issues. In fact, they tend to consider participation and public engagement prevalently in terms of institutional relations or market dynamics while their perception of innovation tends to overlook the role of social interactions.
- Another obstacle was due to the fact that the pilot project was embedded in the ESS when the programme of the course had been for the most part already defined. This fact, on the one side, limited the possibility to set up a longer training module focused on PE and, on the other side, made impossible to systematically connect the module with the other modules and components of the course.
- The lack of a clear policy of ENEA on PE-related issues was another obstacle met during the pilot project. In fact, the original idea was that of using the Consultation Workshop to collect information on the ENEA approach and practices on PE to be transferred to the trainees. However, the workshop clearly showed that ENEA is involved in many PE-related activities, but that it never developed a peculiar point of view on this matter. Consequently, connecting the training module with the ENEA experience was particularly difficult and time-consuming.

### 3.4. Feedback received

As we said above, the interest toward the pilot project was extremely significant among the ENEA project managers. The ESS coordinator as well as some participants in the Consultation Workshops considered the module a successful experiment to be replicated in the next ESS editions and likely in other ENEA training activities.

Also the trainees gave positive feedbacks, showing an interest (or, better, a curiosity) towards PE, but – also because of the limited time devoted to this issue – undoubtedly met some problems in understanding the actual role of PE in energy programmes and in grasping some important aspects of PE approach and practices.

## 4. Grand challenges addressed

The pilot was evidently fully focused on the societal challenge fourth “Secure, clean and efficient energy”.