



Publishable Summary

Summary description of the project context and the main objectives

UNI-SET is a Coordination and Support Action funded by the European Commission's (EC) Seventh Framework Programme (FP7). It began in September 2014 and will last three years. UNI-SET is coordinated by EUA and implemented jointly with KU Leuven, representing the universities in KIC InnoEnergy.

The UNI-SET (UNiversities in the SET-Plan) project aims to mobilise European universities to contribute to the ambitious European energy goals spelled out in the European Strategic Energy Technology Plan (SET-Plan), the European Energy Union and the Europe 2020 strategy for smart, sustainable and inclusive growth.

For EUA, UNI-SET is a step in further developing the European Platform of Universities in Energy Research & Education (EUA-EPUE), which represents the university sector in the SET-Plan and in the European Energy Research Alliance (EERA). The objective of EUA-EPUE is to pool the collective resources and knowledge available in European universities and to become an interface between European universities and the European institutions.

UNI-SET is mapping existing energy-related Master, Doctorate and Research programmes at European universities and is collecting empirical data about the range of university activities in disciplines and scientific fields related to the SET-Plan. It will also identify the skills and professional profiles needed in the current and future European energy sector.

The project aims to identify opportunities for universities to engage in new energy-related, multi-disciplinary activities tackling energy-related challenges. It also aims to reduce fragmentation of European universities' research, education and training capacities in the energy field. Additionally, it seeks to provide opportunities for universities to contribute to policy discussions and to engage in dialogues on the development of the SET-Plan, Horizon 2020 and to participate in consultations on European energy matters and related areas.

→ Map energy-related Master, Doctorate and Research programmes across Europe

UNI-SET provides interactive online maps displaying the spread and diversity of energy-related Master, Doctorate and Research programmes offered by European universities.

→ **Identify the skills and professional profiles required by the European energy sector**

UNI-SET identifies the skills and professional profiles needed in the European energy sector, both in the short and long term, through a survey designed for employers and through a series of workshops.

→ **Discuss the strategic role of universities and facilitate cooperation**

UNI-SET intends to be a sustainable open platform to facilitate the creation of synergies between universities, foster intra-European and multidisciplinary collaboration and provide a welcoming and inclusive forum for new entrants into the European energy research landscape.

The online maps displaying the energy-related Master, Doctorate and Research programmes across Europe allow energy stakeholders to identify institutions that work on energy topics and SET-Plan areas of their interest.

The UNI-SET 'Energy Clustering Events' (ECEs) allow institutional and research leaders from universities to discuss the strategic role of universities in meeting the objectives of sustainable, low-carbon European society and will facilitate the establishment of new consortia to develop joint and/or Master, Doctorate and Research programmes in the energy field.

→ **Strengthen the voice of universities in European energy policymaking**

UNI-SET aims to bring together European universities to represent a collective voice in parallel with other organisations, such as the European Energy Research Alliance ([EERA](#)), KIC InnoEnergy and the European Technology and Industrial Initiatives ([ETIPs](#)). Both [EUA-EPUE](#) and [KIC InnoEnergy](#) are observers in the EERA Executive Committee and have established a number of links with EIIIs. UNI-SET is using its outcomes and deliverables to inform energy, research and innovation policies at the European level.

Description of the work performed since the beginning of the project and the main results achieved so far

Phase one of the UNI-SET project focussed on the implementation of two interlinked data collection exercises –the UNI-SET Universities Survey and the UNI-SET Employers Survey–, the organisation of a series of Professional Profile Identification Workshops, the preparation and beginning of a series of conferences called Energy Clustering Events (ECEs), and the contribution of UNI-SET universities to the implementation of the SET-Plan.

- → The UNI-SET Universities Survey and the European Atlas of Universities in Energy Research & Education

Designed and coordinated by EUA, the UNI-SET Universities Survey was launched on 7 April 2015, providing a European-wide mapping of university-based research and education activities in the energy field.

Information is welcome from all scientific fields, from Science, Technology, Engineering and Mathematics to Biosciences, Life Sciences and Medicine, and from Economics to Social Sciences, Humanities and Arts. By taking part in this innovative survey, universities will become part of the EUA-EPUE Platform and will be invited to participate in its future activities and events.

In total, the survey (until 15 December 2015) identified 864 research topics, 412 Doctoral schemes, and 579 Master programmes. These activities account for 9833 professorial and post-doctoral research staff (FTE), 6286 Doctoral candidates (FTE) and 36903 Master-level students.

The mappings are available online in the “European Atlas of Universities in Energy Research & Education” at <http://atlas.uni-set.eu/>

- → UNI-SET Employers Survey

The UNI-SET Employers Survey gives employers in the energy sector the opportunity to identify the skills and professional profiles of graduates needed in labour market in the field of energy. The survey covers both technical and non-technical skills required from the current and future professionals.

The survey is coordinated by KU Leuven and was designed in cooperation with the five universities of the Third Party Consortium, in coordination with EUA.

- → Profile Identification Workshops

Seven Professional Profile Identification Workshops have been held in the framework of UNI-SET. The workshops brought together energy stakeholders from industry, authorities and academia to discuss the skills, competences and knowledge needed in the current and future energy sector. The outcomes of the workshops, together with the results of the UNI-SET Employers Survey enable the identification of professional profiles for future university graduates and other professionals in the energy sector.

The workshops have been organised by KU Leuven and the Third Party Consortium between May and December 2015.

- → Energy Clustering Events

A series of ‘Energy Clustering Events’ is taking place in 2016 and 2017. The events aim to bring together institutional and research leaders from universities to discuss the strategic role of universities in meeting the objectives of a sustainable, low-carbon European society. In addition, they seek to

stimulate the development of new, state-of-the-art Master and Doctorate programmes, as well as research projects.

At the first Energy Clustering Event, hosted by the Norwegian University of Science and Technology (NTNU) in Trondheim (24-26 February 2016), over 100 participants discussed the topic “Human resources and new knowledge to build the future energy system”. The next events take place at Politecnico di Torino on 26-28 September 2016, at University Politehnica of Bucharest on 21-23 November 2016 and at Imperial College London on 27-29 March 2017.

- → SET-Plan Input

UNI-SET has so far coordinated the response of EUA-EPUE to the SET-Plan consultation process launched by the European Commission in the fields: Solar PV, Concentrated Solar/Solar Thermal Electricity, Offshore Wind, Energy Efficiency in Buildings, Energy Efficiency in Industry and Services, Carbon Capture & Storage and Utilisation, and in Nuclear Power.

Description of the expected final results and their potential impacts and use

The final results and the impact of UNI-SET can be best described by looking at three different categories of outputs and outcomes: 1) the generation of usable and accessible data about the energy research and education landscape in Europe; 2) the structuring effect of the project on the European higher education community; and 3) the lighthouse dimension of UNI-SET, highlighting the way forward for universities in relation to the energy societal challenge.

❖ Generation of usable, accessible knowledge for future activities

UNI-SET is gathering a unique set of data about the activities of universities in the field of energy and makes information available through the “European Atlas of Universities in Energy Research & Education”. As a self-standing tool, the atlas will be a useful resource beyond the project period for different audiences including students, researchers, university leaders, policy makers, industry and others.

In addition, the insights gained through the survey aimed at energy sector employers and the corresponding series of workshops create a pool of ideas useful for higher education institutions to consult when designing or upgrading curricula. An awareness of the employers’ perspectives can also help students to fine-tune their own path from education to employment.

❖ Structuring effect on the university sector

Through the Energy Clustering Events, UNI-SET intends to provide a platform to create new research consortia and the next generation of educational programmes. Good-practice sharing and clustering activities will help universities to develop forward-looking curricula and research projects with a European perspective.

UNI-SET mobilises universities to respond to EU-level initiatives and consultations, encouraging them to contribute and participate in the debate on future research actions and programmes. An outcome will be the increased awareness of higher education institutions about their opportunities and roles in the European energy research system.

❖ Lighthouse dimension of the project

EUA will amalgamate the different insights and practices into a “roadmap” for universities in energy. This roadmap will take into account the good practices collected through the surveys and project events and point out different actions and routes, as well as dimensions to consider, when universities develop their own activities in energy research and education.

The roadmap will thus be useful for universities, to foster strategic activities, and for policy-makers alike, to develop national or regional energy research, innovation and education clusters and to help the higher education sector to be part of the solution to the energy challenge. Such a roadmap will also increase the visibility of the higher education community outside of Europe and has the potential to stimulate similar initiatives abroad.

UNI-SET is a first-of-a-kind initiative of the European university community, taking stock about their activities in a single “societal challenge” field and aiming to foster new developments in the same area. This structure can serve as a blueprint for other initiatives in the higher education sector, structuring and mobilising their activities in a specific societal challenge field, for example health and aging, climate change, or demographic change.