

The energy challenge: Why Europe's universities hold the key

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Universities are uniquely positioned to work with policymakers and industry to shape a sustainable energy future, writes Torbjørn Digernes.



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The energy challenge touches every single life in Europe. And it is strikingly complex: Providing a reliable supply of clean and affordable energy raises social, political, economic and technical issues that must be addressed in unison. It is a vast challenge, one of the greatest of our time. However, Europe has a key resource in the palm of its hand: the continent's wealth of universities.

Not only do universities develop new knowledge, new understanding and new insights that lead to solutions to complex challenges, they are also uniquely positioned to work with policymakers and

industry to shape a sustainable energy future.

At the European University Association, we have spent three years creating connections between more than 200 universities with energy education and research programmes. These universities are now mobilising on a wide scale to address the energy transition by focusing on the future of research, innovation and education. Europe's policymakers, both at the EU and national levels, need to take notice, harness their potential and support their role in the energy challenge.

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To do this, they first need to recognise and engage with universities as a source of knowledge and advice for governments and industry looking for solutions. Policymakers also need to invest in fundamental university research - keeping in mind the necessary balance between urgent energy issues related to the environment and long-term energy and emission targets.

Policymakers should also be ambitious in setting their energy goals, remembering that widescale societal transformation is possible if we couple social sciences and humanities with science and technology to make innovation flourish. Technological advances alone will not solve the societal challenge of the energy transition. This will require a fundamental restructuring of the societal fabric. This is, after all, about people and societies.

Europe's energy transition needs to adopt the very latest digital developments, for example smart metering and intelligent control systems. The Internet of Things and the fourth industrial revolution are integral parts of the solution. However, they are moving faster than the energy transition itself and university research and education have a role to play in keeping Europe up to speed.

Furthermore, Europe's leaders should implement measures that support industry investment in cutting-edge knowledge and technology generated in collaboration with universities. They must put the pedal to the metal in promoting open science.

This will accelerate global energy innovation and allow European knowledge to play an even bigger role in fulfilling the objectives of the Paris agreement and the Sustainable Development Goals. Europe can and should be a leader in these global efforts.

Finally, policymakers need to keep sustainable energy at the top of the political agenda and adequately reflected in the next framework programme for research and innovation - also in terms of adequate funding. They must also work to align diverse efforts in energy research. They can do this by coupling the EU's framework programme with mission innovation. This would also position Europe as a world leader in energy innovation.

All contemporary societies rely heavily on energy. Efficiency is key to securing Europe's energy supply, reducing costs, stimulating employment and improving overall quality of life. Of course, it also

has an intrinsic impact on the environment that we all share.

To achieve these very important goals, research is needed to further develop and design new technologies and strategies. Universities have a key role to play in making this happen and Europe has a lot to gain by mobilising and firmly supporting them. Only then will the continent discover what a treasure they represent in this context, not least in producing the human talent and agents of change that will make the energy transition happen.

About the author

Torbjørn Digernes is Chair of the EUA energy and environment platform (EUA-EPUE)

The [European University Association](#) [6] is the representative organisation of more than 800 universities across Europe. The [EUA energy and environment platform \(EUA-EPUE\)](#) [7] connects universities and stakeholders who are active in energy research, education and innovation. It aims to facilitate the full participation of European universities in energy-related EU programmes and to achieve the creation of the Energy Union and a sustainable energy future for Europe. It recently released [a set of key messages for policymakers](#) [8] and an [Action Agenda](#) [9] for universities.

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