



*Special Edition
Newsletter to the Academia*



A holistic and Scalable Solution for research, innovation and education targeting Energy Transition

What's inside?

You and ASSET

Educational Programmes

The ASSET Learning Graphs and Learning Graph Tool

Stakeholder Analysis

Massive Open Online Courses (MOOCs)

ASSET Community Forum and more!



You and ASSET

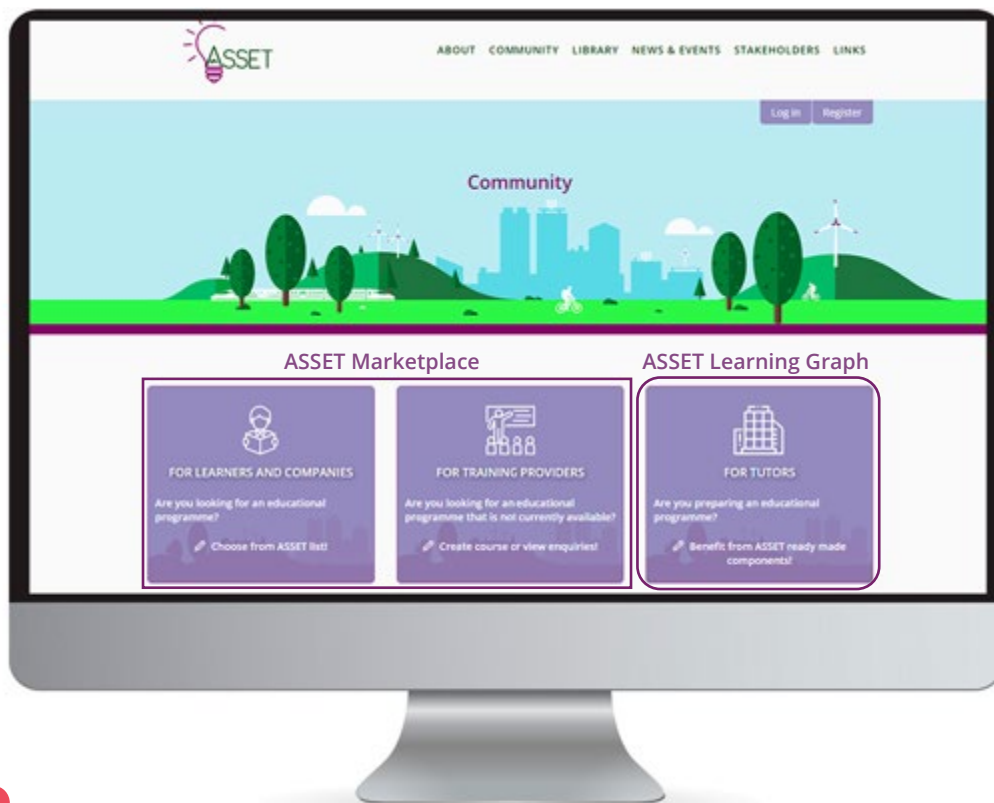
The ASSET ecosystem (community) will enable you, as an educator and researcher, to interact with actors involved in the energy transition. This includes – other universities, energy suppliers, energy citizens, and policy makers.

The ecosystem will also assist you to foster interdisciplinary research, education and innovation. It will help in the integration of topics in the social sciences and humanities into the energy transition programmes.

The ASSET marketplace for educational programmes will enable you to

- select among the ASSET educational programmes with different learning styles (MOOC, blended, traditional, etc.), and
- design industry-driven programmes (or programmes on-demand).

The ASSET Learning Graph Tool will enable you, along with other actors, to facilitate the creation of new programmes for the energy transition and the update of the existing ones, while maximizing the reuse of learning materials.



<https://community.energytransition.academy/>

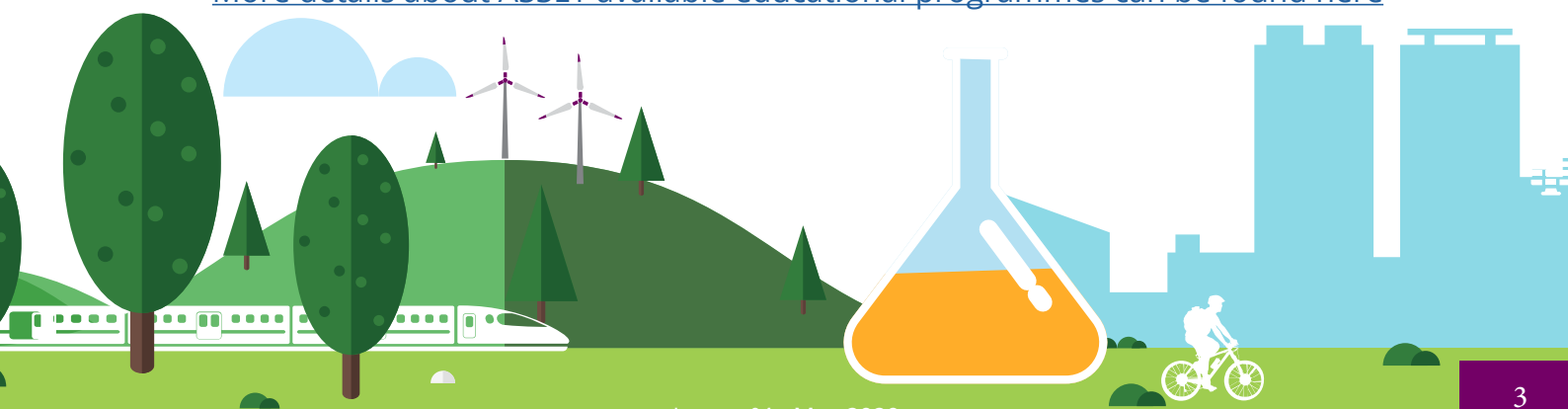


The ASSET Educational Programmes

Below, you may find the educational programmes that are currently being prepared. These programmes aim to help fill the knowledge, skill and competency needs of the energy transition:

Programme	Delivery Mode(s)	Host Institution
AC Microgrids	1-Semester Course and MOOC	AAU
Power Quality in Microgrids	1-Semester Course and MOOC	AAU
DC Microgrids	1-Semester Course and MOOC	AAU
Measurement techniques and distributed intelligence for power systems	1-Semester Course	RWTH
Implementation of automation functions for monitoring and control	1-Semester Course	RWTH
Maritime Microgrids	1-Semester Course and MOOC	AAU
Power Systems Dynamics	1-Semester Course	RWTH
Optimization Strategies and Energy Management Systems	1-Semester Course and MOOC	AAU
Hydrogen as energy vector	1-Semester Course and MOOC	UPV
Energy and environment	1-Semester Course and MOOC	UWA
New Materials for solar cells applications	1-Semester Course and MOOC	UWA
Innovation processes in the energy sector	1-Semester Course	OTEA
Energy Efficient and Ecological Design of Products and Equipment	1-Semester Course, MOOC	UWA
Multi-terminal DC grids	Seminar	RWTH
Case study on distribution grid operation	Seminar	RWTH
Understanding responsibility in research and Innovation	Seminar	RWTH
Economics of energy sources and the optimal integration of renewable energies and energy conservation measures	Seminar and MOOC	LS
Behavioural change as a powerful drive to minimize the energy consumption while providing the same level of energy service	Seminar and MOOC	LS

[More details about ASSET available educational programmes can be found here](#)

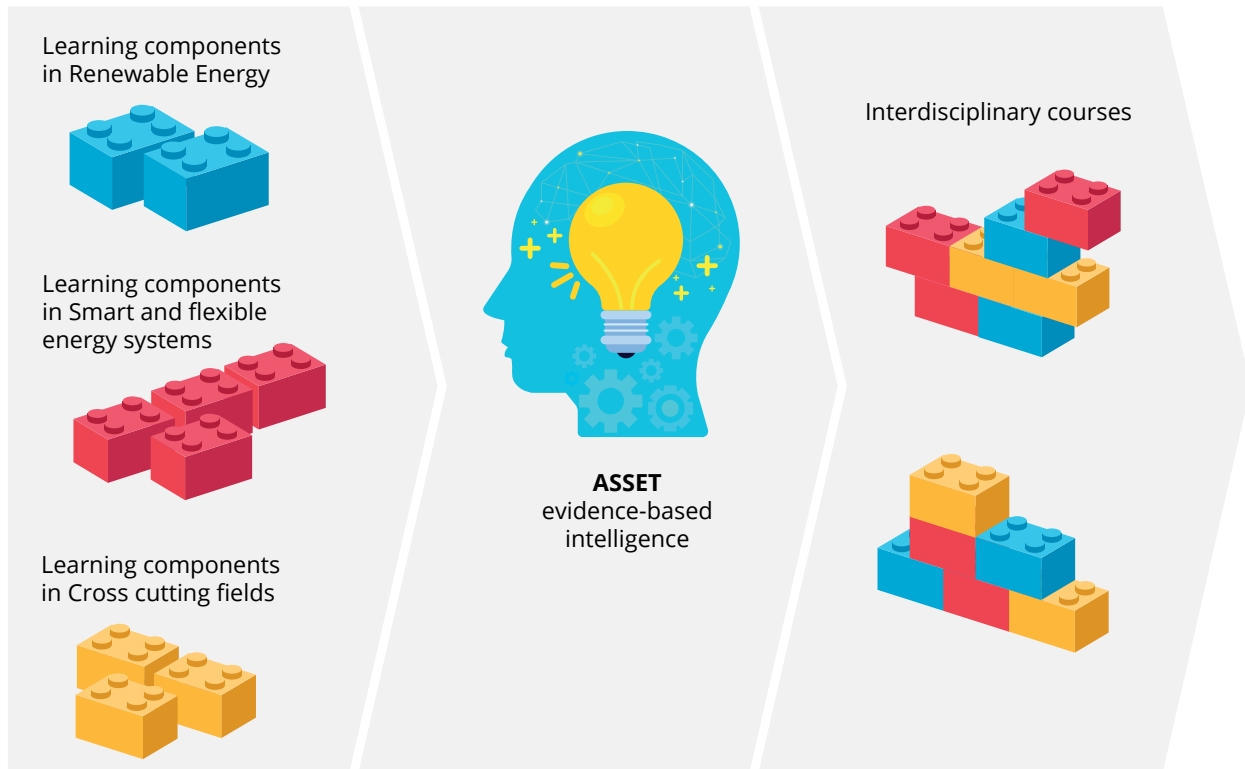


The ASSET Programmes (continued)

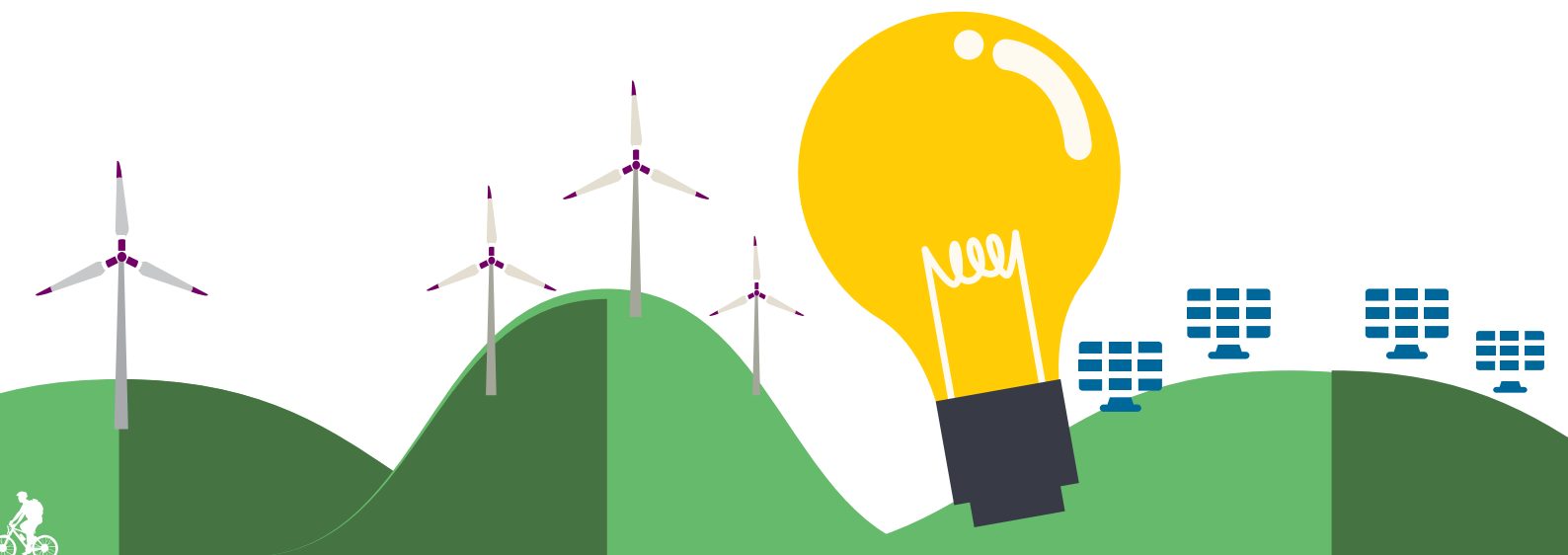
Programme and Link	Delivery Mode(s)	Host Institution
Challenges and solutions in Future Power Networks	MOOC	RWTH
Innovation and Diversity in engineering	MOOC	RWTH
Renewable Energy Technologies	MOOC	UNINA
Electric heat pumps in the energy transition framework	MOOC	UNINA
Green professionalization and ethics	MOOC	UNINA
Corporate Communication and Corporate Social Responsibility	MOOC	UNINA
A holistic approach for Energy Transition: territory, networks, and sustainability	MOOC	UNINA
Train the trainer	Face-to-Face, MOOC	OTEA



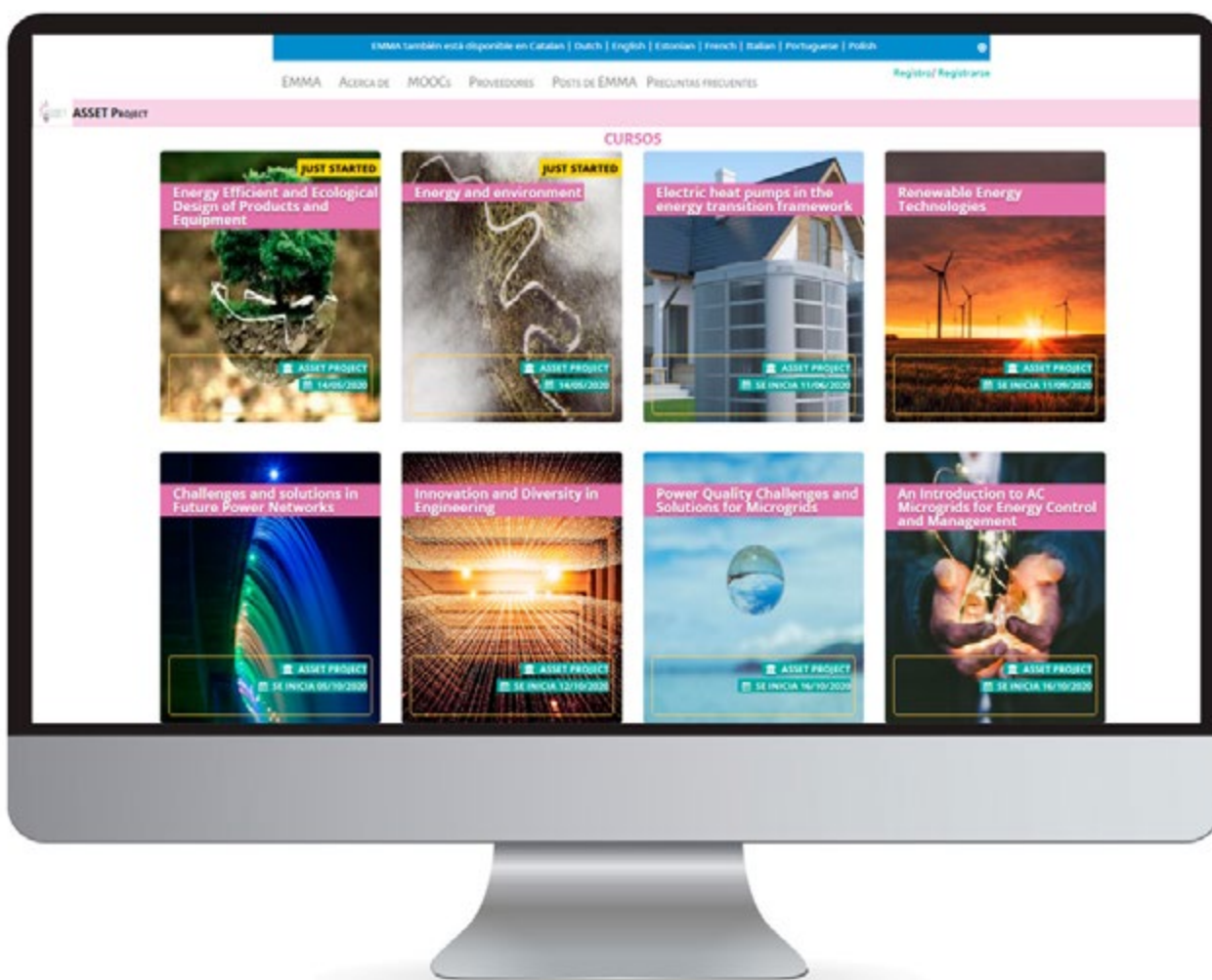
Aside from the listed programmes above, the ASSET project will also design and create interdisciplinary courses, programmes for citizens to raise awareness, and programmes on-demand based on the requirements of industry partners. By the end of 2020, the materials of ASSET courses will be shared with the public, including university actors.



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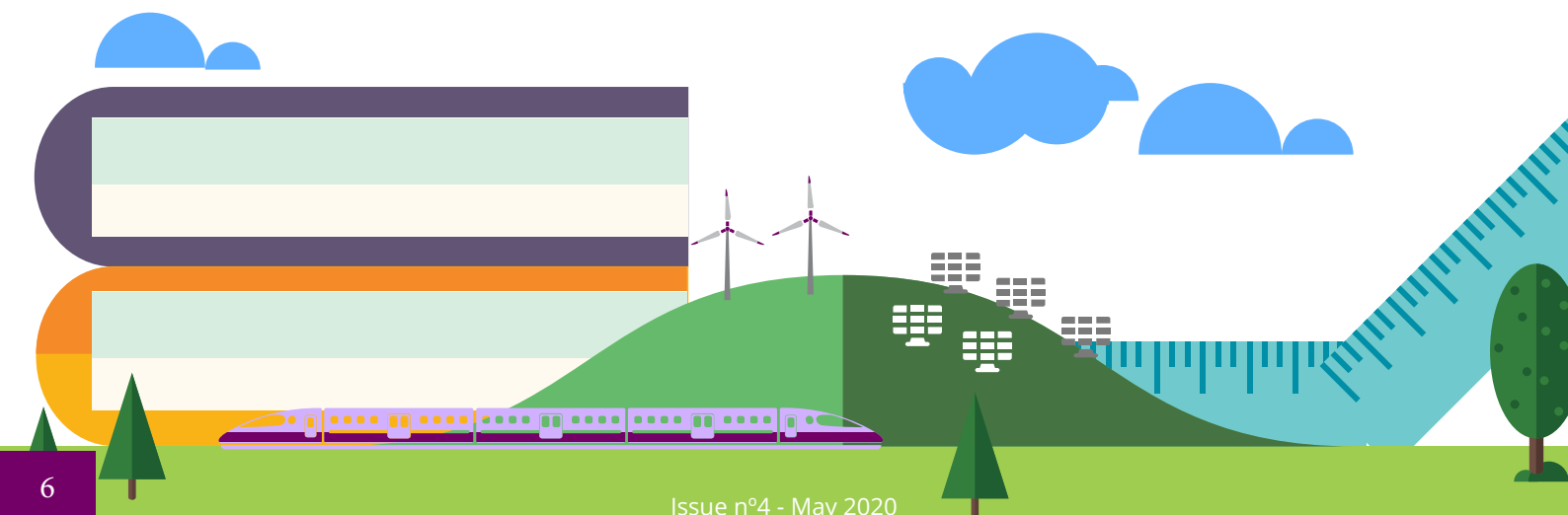


ASSET Programmes on EMMA

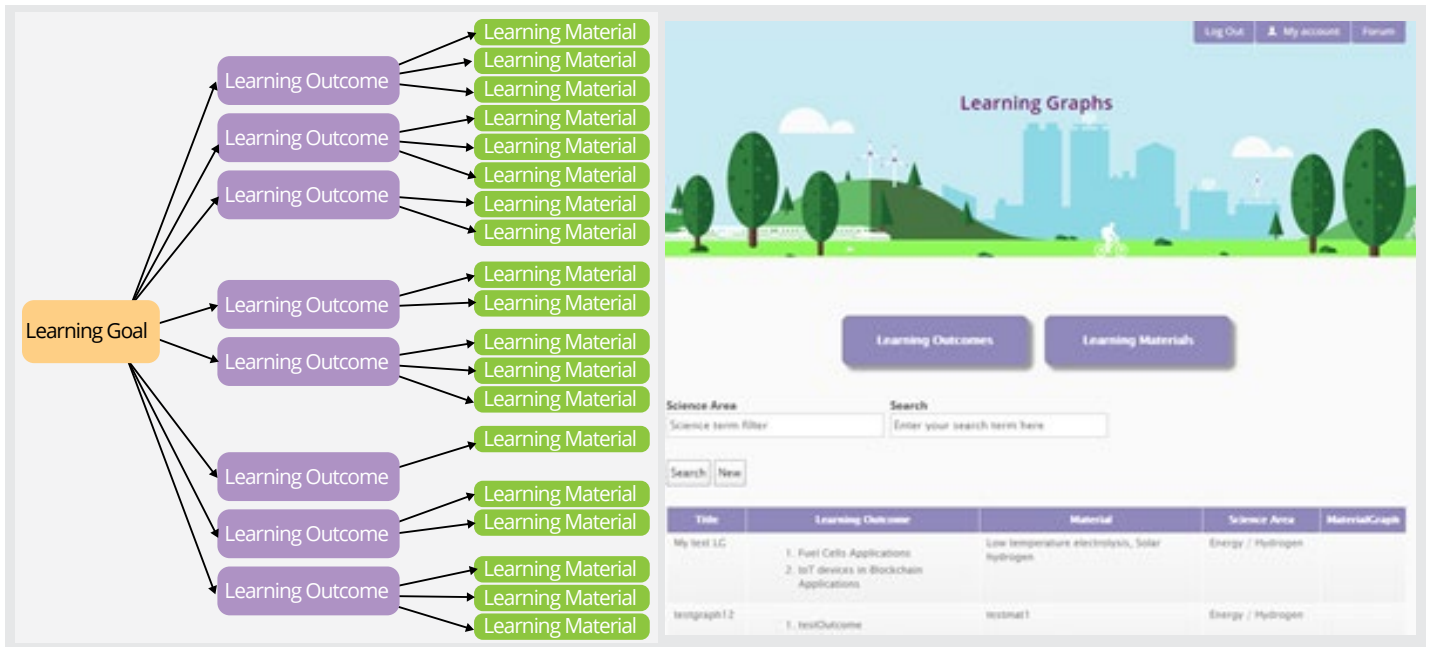


ASSET Programmes on EMMA

The European Multiple MOOC Aggregator called EMMA for short <https://platform.europeanmoocs.eu/> hosts the MOOCs created within ASSET. You may see our courses and participate in them just by registering on the EMMA platform. The ASSET MOOCs will, however, be offered on EMMA on different dates, depending on the schedule of the host university. Some of the MOOCs in EMMA are shown below.



The ASSET Learning Graphs and Learning Graph Tool



We are defining the ASSET in terms of their learning graphs. These graphs relate the learning topics, learning outcomes, and learning materials in each programme. These graphs facilitate the reuse of materials among the ASSET programmes.

In each page of the learning graph tool, the user can search contents based on specific attributes (e.g. EQF level, number of trainees, keywords, location) related to each learning material. This way, users can navigate

through the existing learning graphs and materials and reuse them in many ways. The obvious benefit is that she/he can find and reuse material referring to a specific topic, but the most important is that the search mechanism is capable of filtering materials based on features like the content format, EQF level etc. So, users can perform queries for a specific topic with their own constraints like audience size, remote or face to face teaching, content type and many more.



Stakeholder Analysis

The following list shows the relevant needs and goals of universities, research centers, and training actors in terms of knowledge, skills and competences (KSC) for the energy transition. This list is the result of interviews and stakeholders analysis that we conducted in ASSET. In the interviews, there were numerous participants from the academia classified as follows: seven from universities, one from training centres, and three from research centres.

Outcomes of the interviews and stakeholder's analysis for participants in the academia

KSC Needs

- Environmental science
- Software and IT technologies
- Communication
- Dissemination and advocacy,
- Data science and big data
- Estimation and forecasting techniques
- Policy making
- Legislative framework and politics
- Economics
- Augmented reality
- Intellectual property rights
- Soft skills
- Social science
- Marketing Project management
- Decision making
- Negotiation and mediation
- Risk analysis
- Interdisciplinary approach
- Distribution grids and smart grids
- Modelling and optimization of complex energy systems

Stakeholder Goals

- to share learning materials
- to identify educational needs
- to enhance the quality and interdisciplinarity of education and training programmes
- to gain visibility in front of industry sector and society
- to connect to prestigious European Universities and academic networks
- to strengthen relationships with industry through mobility mechanisms
- to raise awareness of public institutions (possible fallout in funding or support of programs for workers)



ASSET Community Forum

The ASSET Community Forum is active, and we invite you to join and contribute

<https://community.energytransition.academy/forum>

The ASSET community forum will serve as a discussion platform for all the energy transition drivers from diverse backgrounds to express their views about key issues related to the energy transition. The dissemination of knowledge, practices and lessons learned by the energy transition stakeholders are the key motivations for

the development of this Forum. The key stakeholders of energy transition including the members of energy companies, policymaking institutes, University faculty, students and society citizens can raise their queries regarding key energy knowledge, competencies, and skills. The active members of the forum will answer those queries based upon their expertise and exposure pertinent to the relevant energy issue. The forum will also act as a channel for professional networking to support industry/academia mobility, including opportunities for internships, projects, thesis work and collaborative research, between industrial and academic partners.



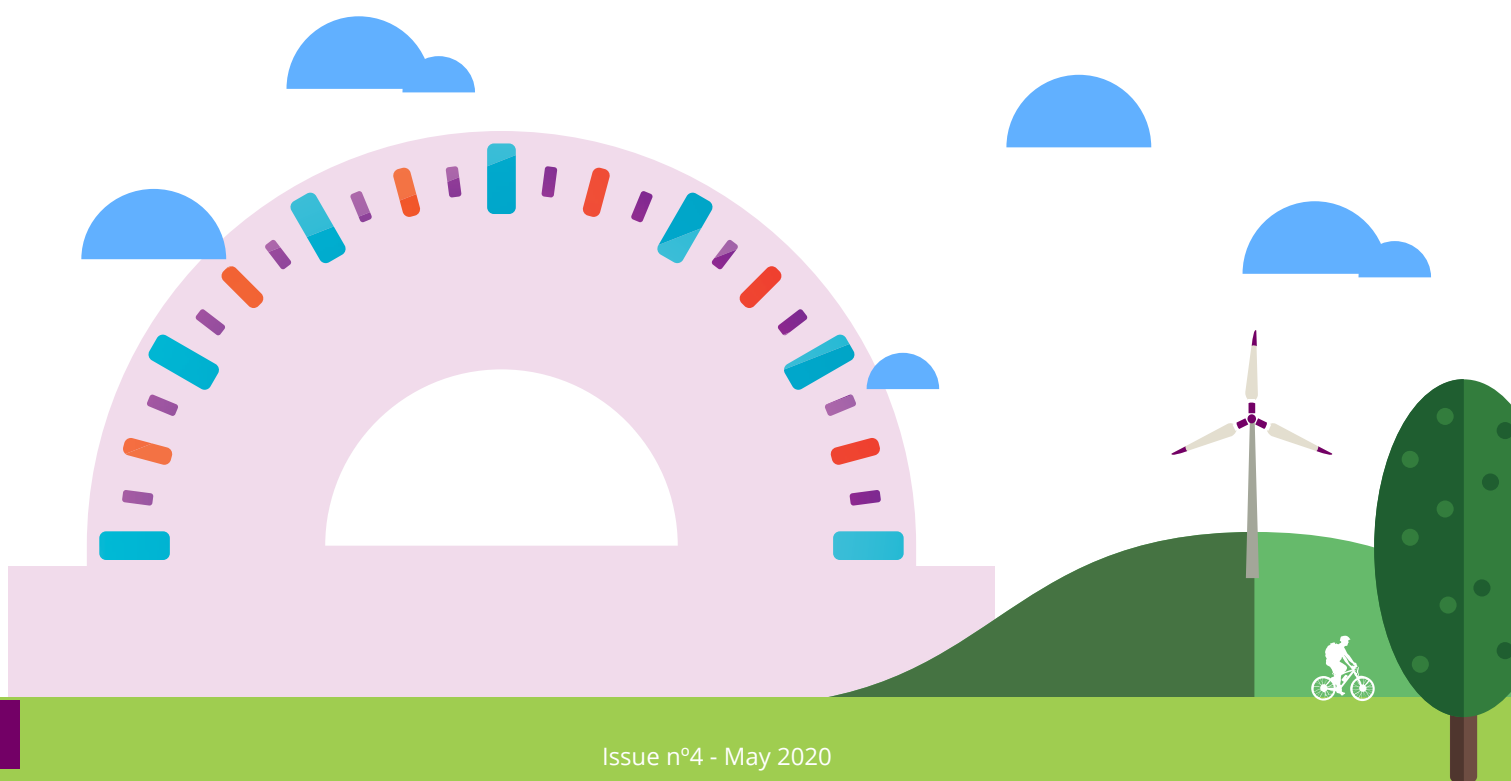
ASSET Research Outputs

Paper 1

- ICEIME-2019 | Prague, Czech Republic | August 15-16th , 2019
- <https://www.scientificfederation.com/iceime-2019/>
- Doping is an important way to tailor the properties of semiconductor materials and among all Cu doped ZnO nanowires is very important recently because of its interesting properties, such as p-type, room temperature ferromagnetism and highly efficient solar cells (SCs). In this research work, we investigate the structure using micro Raman Spectroscopy and MicroPL techniques of these nanowires transferred to a Si/SiO₂ substrate.

Paper 2

- MedPower 2020 | Paphos, Cyprus | November 9-12th, 2020
- <http://medpower2020.org/>
- The paper examines the role of energy recovery from wastes in the decarbonisation efforts of the EU Power Sector. The results verify the importance of Waste-to-Energy facilities and RDF, SRF and biogas as fuels in the EU power sector, in covering part of the energy needs of the EU and contribution for achieving the goals for renewable energy production.



ASSET in Conferences

- [Keynote at Fraunhofer FIT Innovation and Networking Days 2019](#)
Bonn (Germany) | 11/06/2019
- [International Congress and Exhibition on Industrial and Manufacturing Engineering](#)
Prague (Czech Republic) | 15/08/2019
- [European Conference on Power Electronics and Applications EPE'19](#)
Genova (Italy) | 14/09/2019

ASSET in Workshops

- Workshop: Expert vocational professions workshop
07/10/2019
- Workshop: European Energy transition projects
11/12/2019
- Workshop: Research tools of ASSET project
23/01/2020
- Workshop: Center for Research on Microgrids
12/02/2020



About us

ASSET team is a well-balanced consortium, consisting of eleven partners from six European countries.



<http://energytransition.academy/>



ASSET EnergyTransition



@Project_Asset



ASSET EnergyTransition

<https://energytransition.academy/newsletter>



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