

Issue 8 | April 2021



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

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ASSET Educational programmes



One of the key objectives of ASSET is to assess the key knowledge skills and competencies required for Energy Transition and prepare educational programmes to meet these needs. ASSET educational offers mainly included:

- Massive open online courses (MOOCS) for university students, lifelong learning, and public
- Classroom and blended short programmes
- Interdisciplinary programmes
- Industry on-demand courses

ASSET consortium delivered these educational offers in two phases. The first phase strated in March 2020 and lasted till August 2020. During the **first phase of delivery**, **5 class-based courses**, **7 seminars**, **and 9 MOOCs were delivered**. The **second phase** of delivery started in November 2020 and lasted till April 2021. **In this phase 10 class-based courses**, **4 seminars**, **and 11 MOOCs were delivered**. Additionally, 5 interdisciplinary courses and 2 industry on-demand courses were also delivered in the second phase.



For the delivery of MOOCs, Europen Multiple MOOC Aggregator (EMMA) platform was used. The ASSET educational offer during the first phase recruited **823 students** enrolled in a MOOC offered through the EMMA platform while in the second phase it recruited **1635 students**. Some of the students were enrolled in both runs, however, **the total number of distinct recruitments is 2458**. Of these 2458 enrolled learners, 68,42% were not able to follow lessons completely, while 13,87% got a certificate of completion.





ASSET Educational programmes



Overall educational offer assessment highlighted that a clear majority of students having a Master (38,89%) and a Ph.D. (29,63%) enrolled for class-based and blended short programmes. Furthermore, it is evident that the partners of the ASSET project are mostly universities and therefore undergraduate learners were also the privileged targets (31,48%).

Overall ASSET educational offers reached more than 5000 people across the globe through the EMMA platform, MOOCs, class-based courses, and workshops. The assessment and evaluation surveys are completed by more than 400 students and more than 30 instructors.

The detailed analysis of evaluation confirms the satisfaction of instructors and participants with the quality of the delivery in the field of Energy Transition. The successful integration of interdisciplinarity in educational offers, market needs assessment and resultant on-demand courses will open up new dimensions for synching up the synergies of industries academia, training actors, and policymaking institutes. The evaluation of pilots' offerings (first and second phases) serves as a baseline to collect feedback and draw comprehensive guidelines for future educational programmes. Future offerings based on the lessons learned from pilots will contribute in terms of their quality enhancement, value addition, expandability, scalability, and sustainability. Thereby, following the ASSET model, will catalyze an exponential growth in the achievement of required Knowledge, Skills, and Competencies to tackle the grand challenge of the Energy Transition.





The community and future plans

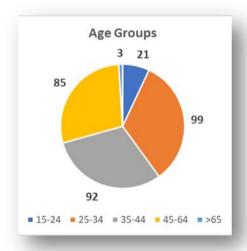
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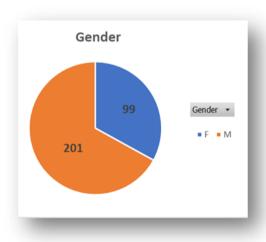
One of the main goals of the ASSET Project was to set up a **COMMUNITY that** brings together all energy transition and education stakeholders (companies from the energy sector, universities and training actors, authorities and policymakers, research centers, associations, and students).

Indeed, the ASSET project is based on a collaborative approach, where all the Community members can CONTRIBUTE by supplying and sharing learning resources and materials or by offering training opportunities (e.g. Ph.D. positions, traineeships) or, on the other side, can BENEFIT of ASSET tools and services, by using the learning graph tool to create a course or the marketplace to look for an existing one or ask for an on-demand course.

In these 2 years (ASSET project started in May 2019), the ASSET Community has grown from a small group of consortium members representatives to a family of over 300 members, coming from the 5 continents.

The following tables and graphs report some information about the Community members.









Country	Members	Country	Members
Afghanistan	1	Japan	1
Algeria	1	Latvia	1
Argentina	1	Malaysia	1
Australia	4	Mexico	2
Austria	1	Morocco	1
Bahamas	1	Nepal	1
Belgium	21	Netherlands	5
Brazil	5	Pakistan	6
Bulgaria	1	Poland	2
Canada	4	Portugal	7
Chile	3	Romania	1
Colombia	1	Serbia	1
Croatia	2	Slovenia	2
Denmark	10	South Korea	2
Egypt	3	Spain	51
Ethiopia	1	Sweden	1
Finland	1	Switzerland	1
France	2	Tanzania	1
Germany	12	Tunisia	1
Greece	33	Turkey	2
India	10	United Kingdom	6
Ireland	1	United States	2
Italy	81	Yemen	2

As can be seen, the majority of the members are from the countries where FU the consortium members are Nevertheless. based. the number of members coming from outside the EU increased rapidly the second year of the project.

Regarding the age, the majority of members are between 25 and 44 years, but young students (15-24 years) are also joining.

Gender balance is still a bit.... unbalanced since only 1/3 of the members are female. This ratio is quite in line with the sex ratio of workers within the energy

sector, despite it is now well acknowledged that women can play an essential role to tackle many of the energy transition challenges (for example with reference to energy poverty and education).

ASSET also organized a specific (online) event to discuss this topic (GIRL POWER: the role of women in the energy transition | Asset) and attract more female students and professionals in the Community. Additionally, both enostra and Ecopower submitted a specific survey to their members to analyze the role of women in energy cooperatives.





Finally, we can see that the large majority of ASSET Community members come from the "Research and education" stakeholder group (mostly academic representatives, but also some renowned research centers' representatives), followed by a relevant number of representatives of "Companies from the energy sector" group.

Stakeholder Group	Number of members	
Research & education	164	
Companies from the energy sector	67	
Societal actors	14	
Individuals	22	
Other	11	
Policy bodies	6	
Energy citizens	16	
Total	300	

The ASSET Consortium is overall quite satisfied with the results reached up to now and the efforts made to identify, reach and engage all these stakeholders which cannot be wasted with the end of the project (unluckily the ASSET project will end in 2 weeks).

So, what about the future?

The consortium partners, and in particular enostra, are planning to keep the ASSET Community alive. This means that we will continue to disseminate relevant news through our social media channels (where we also gathered a quite numerous followers "community"), to exchange information and resources with other similar EU projects, to engage new education and training actors in order to enlarge and update our learning offer.

So, in case you haven't yet, you are still in time to join the Community and to invite your colleagues and friends to join as well. We are definitely willing to go ahead. Map your (learning) needs, track your (training) route and empower yourself: be an energy transition driver.

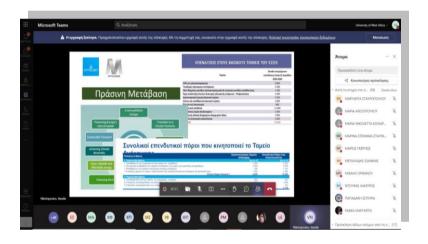


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Organization of a workshop in Greece



On 20/1/2021, UNIWA organized a workshop titled: "Environment-energy-shipping: a new challenge" in the framework of which the energy transition challenge in the maritime sector was discussed. The first talk was from V. Nikolopoulos, the head of applied research and development of protergia, Mytilineos (a group of companies one of which is acting as DSO in Greece), and ASSET ambassador. It was about energy transition and its technological challenges. The 2nd talk was from John Kokarakis Scientific director of Bureau Veritas who concentrated on the reduction of CO2 in shipping and the last one was from Prof. N. Nikitakos on Green Shipping. After the three talks, a social workshop was mediated by prof. M. Lekakou during which a vivid discussion has held demonstrating the interest of the audience on the topics of the events.



The event was addressed to the community of the University of West Attica and of the University of the Aegean and attracted over 60 attendees. It was held virtually (due to the COVID pandemic) and the language used was Greek. The programme of the event and indicative screenshot are shown in the figure.





Participation on an International Forum



RWTH Aachen University, one of the ASSET members, was the organizer of the 3rd IEEE International Forum Smart Grids for Smart Cities. The event was held between 17th and 23rd March 2021 as a fully virtual event. The conference was a premier event with keynotes, tutorials, and panel sessions, featuring about 50 notable speakers, each providing a unique international perspective on technology, applications, standards, and policy pertaining to Smart Grids as enablers for Smart Cities and other Smart Community solutions.

The event was opened by a keynote from Mark Van Stiphout from the European Commission. His keynote focused on the EU's support from energy system innovation to realize the Green Deal objectives. The other keynotes and technical sessions gave enlightening perspectives on many core topics around the energy transition, such as the role of local energy communities, the future solutions for mobility, the opportunities offered by big data platforms and artificial intelligence, and the challenges associated with cybersecurity for critical infrastructures.

Education was of course also one of the pillars of the event. The last technical session of the conference was entirely dedicated to this topic, with the panel "Education in the digital era for digitalization". The session was moderated by Dr. Panos Kotsampopoulos, from the National Technical University of Athens. Different key topics were discussed in this panel, including the new trends in education and training arising due to the Covid pandemic and the emerging skill needs of the industry, and the skill offer of education providers for the digitalization of the energy sector.

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This session also featured an ASSET contribution, with prof. Ferdinanda Ponci, from RWTH Aachen University, presenting the "ASSET learning community and ecosystem for educational services in the energy transition".

The discussions in the panel highlighted the key contributions brought by the ASSET project for the development and piloting of new education concepts as well as the synergies that the ASSET community can build, also after the end of the project, with other education initiatives, such as the H2020 project EDDIE (Education for Digitalisation of Energy).



Finally, the forum offered a unique opportunity for research projects to showcase their activities in a dedicated area. ASSET was one of the European projects represented with a virtual booth. The booth offered to the forum participants an attractive overview of the project activities, with brochures, leaflets, videos, and the ASSET MOOC Book. In addition, group chats and interaction panels allowed direct communication with interested visitors.

The material and videos of the full event are available at the IEEE Smart Grids resource center website.





Organization of the ASSET Final Event + Press Release

Having approached its end, the ASSET project hosted its Final Event online, on 15 April 2021. The ASSET project Consortium hosted its Final Event, aimed at showcasing and framing the Project results achieved within its duration. The online event had 100 participants coming from industry, research, and policy and was organized by ASSET partner EASE – The European Association for Storage of Energy with participation from the Consortium.

The event started with a keynote speech by Michaela Giglia, Project Officer in charge of ASSET from the European Climate, Infrastructure and Environment Executive Agency (CINEA), who went through the achievements of the project in its two years and the importance of addressing its topics of focus in order to foster the energy transition. A second introductory speech was given by Lorenzo Pagliano, Professor and Coordinator of the RIDEF Master programme at the Polytechnic University of Milan, titled "Transitioning without training? A call to action", focusing on the main topics that require attention in the energy transition in terms of training needs.



The ASSET Consortium thanks all attendees for the participation and all stakeholders involved throughout the Project, who showed that the work pursued within the project had an actual impact! The full Press Release can be found here.



Sustainability Plans



ASSET project is coming to the beginning! Not end! Did you know that?

We have established a true Pan European Energy Community and offer the best energy-transition related courses while ensuring everyone has access to them.



Join us and keep on learning!

In R&D projects sustainability is closely related to exploitation, but they tackle different faces of the same issue. On one hand, sustainability refers to the long-term availability of the project results as well as their progress, availability, etc., to make them usable. On the other hand, exploitation refers to the use/exploitation of those results offered to the targeted participants and meeting the stakeholder's needs. We have set in place both!

ASSET ecosystem will be available for you beyond the project timeline thanks to two main EU actors: the **EMMA and PANTERA-EIRIE platforms**.

Our offering will be available

on EMMA platform https://platform.europeanmoocs.eu/ where ASSET courses will be available over time and on the PAN European Technology Energy Research Approach via the EIRIE platform.







Already, the ASSET learning offer is on PANTERA-EIRIE platform (EIRIE stands for European Interconnection for Research Innovation & Entrepreneurship).

All services will be available for the next 5 years and based upon the demand of potential new students who will enroll in ASSET courses. At the same time, ASSET services will be maintained in PANTERA for the next 7 years. This EU project is creating a European Forum (with the support of JRC) on energy-related issues.



All our courses will be available without costs until 2022! So, don't wait more and enrol now! https://www.energytransition.academy/courses

All available courses will be for you in the next 5 years. After that students will have the option to pay 80€ per certificate. Purchasing a certificate is optional for students. You can decide if you want to have the final certification or not.

Join us and keep on learning!





STAY CONNECTED WITH US



During these 2 years, the ASSET project has achieved many goals such as:

- Creation of the ASSET community attracting and engaging different actors as universities, research centers, training actors and students.
- Developed educational programmes and delivered them to the targeted actors across EU universities, companies from the energy sector, and EU societies.
- Supported trainers to cultivate new talents in the new generation of engineers.
- Interacted and collaborated with numerous experts and energy actors to increase social awareness about the energy transition.

All that work would not have been possible without our team.
ASSET consortium, consisting of eleven partners from six European countries that represent different sectors and provide their knowledge to make ASSET better.

Many thanks to all of them!

Here are the links of all ASSET partners to help you keep learning about energy transition and innovative projects:

- o ATOS
- University of West Attica
- RWTH Aachen University
- o European Association For Storage Of Energy
- OTE Academy
- Aalborg University
- o University of Naples Federico II
- Polytechnic University of Valencia
- o Logical Soft
- Ecopower
- o **Enostra**



THANK YOU AND SEE YOU SOON!



ENERGY TRANSITION IS IN OUR HANDS!









