



Education for Digitalisation of Energy

Newsletter no.14 – April, May, June 2023

Invitation for Registration to EDDIE database.

The consortium team has been working to develop a dynamized and elegant Stakeholder Database which will include all the relevant stakeholders for the EDDIE project.

The database aims to create synergies and provide relevant information for people interested in the energy sector, both for professional and educational matters.

Through the analysis of data previously gathered in the initial stakeholder database, the new and improved version of the EDDIE DATABASE has been developed in order to store information in a more organic way, best suited to be used everywhere when needed and easier to be managed.

Potential EDDIE members will be able to apply by filling in an application with the relevant information needed from them. Once the application is filled in, it will then have to be approved by the consortium members. This approval of the applications will ensure the quality and relevance of the members of the platform.

REGISTRATION

Welcome to EDDIE!

We are happy to have you with us! Please fill-in the form below and create your **EDDIE MEMBER** account on our website and become part of our Stakeholders list.

[EDDIE Home Page](#)

Create Account

Information about you

This section refers to your own profile. Unless explicitly specified, all data remain private

The platform is ready for the stakeholders to begin the applications, register their companies, research institutes, universities, VET providers, industry representatives etc.

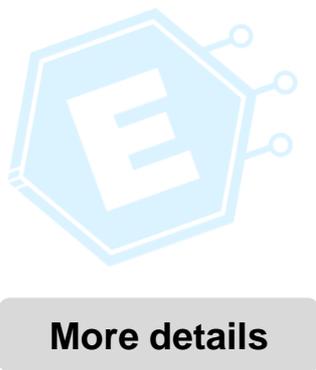
The database has been launched through the EDDIE website and the registration process can begin by clicking on the button below.

EDDIE Project representatives hosted the 1st and 2nd workshops on "Large Scale Partnership for Digitalisation of Energy".

EDDIE representatives launched the first online workshop for the development of a "Large Scale Partnership for Digitalisation of Energy" on the 30th of May 2023 and hosted the second one on the 27th of June 2023. The events have been organized in collaboration with European Commission's (EC) Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs (DG GROW) and Directorate-General for Energy (DG ENER) to address the need of having a skilled workforce to accelerate the digital transition.

The main objective of the meetings was to discuss and establish the Agreement on which the Partnership will operate. Through the Digitalising the energy system - EU action plan, the EC has manifested the intention to "Support the establishment of a large partnership on the digitalisation of the energy value chain as part of the EU's Pact for Skills".

The 2nd workshop has been registered at The European Year of Skills which is putting skills at the heart of the EU policy debate. This EU's initiative is a key one for the project since it is in line with its objectives and having a workforce with the skills that are in demand contributes to sustainable growth, leads to more innovation and improves companies' competitiveness. Throughout the year, various stakeholders, including the Commission, the European Parliament, Member States, social partners, public and private employment services, chambers of commerce and industry, education and training providers, as well as workers and businesses, will work together to promote skills development.



Taking into account the EDDIE's activities focusing on the demand for skills from the industry, the offer from education and training institutions, the education and training systems of many European countries, the designed and implemented database to support a strategic map of stakeholders and the deployment of several demos and pilots, are qualifying the recent established association (the EDDIE Entity) to be in charge of creating a Large-Partnership on skills for the digitalisation of the Energy System (the Partnership).

The strategy is to build on the results and platform of EDDIE project in order to achieve the digital skills required by the European energy system during its transition.

EDDIE Project Participated at the “NSF Joint US European Workshop: Flexible Electric Grid Critical Infrastructure for Resilient Society”.

Eddie representatives participated at the NSF Joint US European Workshop: Flexible Electric Grid Critical Infrastructure for Resilient Society which was held between 21st and 22nd of April 2023.

Mr. Alexandros Chronis presented insights and open questions produced by the ongoing work of the project during the discussion on the topic “The education and training fundamentals for the realization and support of a resilient society”.

He stressed the importance of identifying skill gaps and anticipating skill needs to support the digital transformation of the energy sector, constantly upskilling and reskilling the workforce to keep up with the emerging challenges the industry faces.

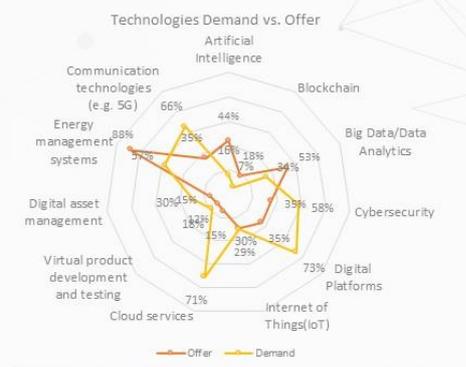
The opportunities that new technologies provide by utilizing advanced technical tools and educational methodologies to enhance student engagement and learning were stressed.

Key takeaways

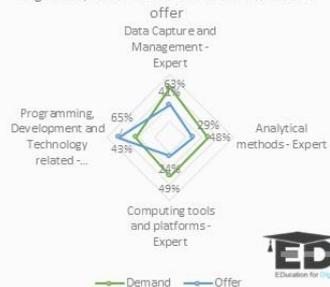
- 💡 The key areas that present skill gaps towards digitalization converge towards **data management and analysis, big data, cybersecurity, and programming & development** competences
- 💡 The “Power” sector showcases the biggest skill gaps. Possibly linked to the increase in distributed energy recourses, smart grids, etc.
- 💡 Apart from the technical skills and competencies, **transversal, business, and green skills** are very important in the energy sector



- University curricula, online training platforms as well as industrial training programs cover several aspects of digitalization, yet there is plenty of room for improvement to foster the digital transformation.
- How can education and training providers establish a link with the industry ?
- A systematic way of anticipating skill needs is important



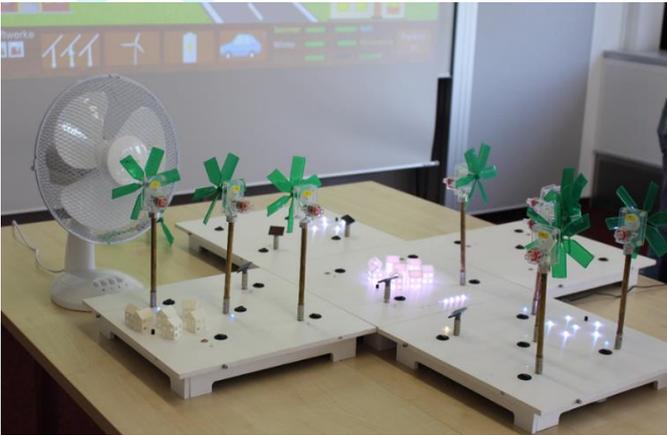
Engineers/Researchers- Skill sets demand vs offer



Technological advancements can revolutionize education by providing a variety of tools such as e-learning tools (webinars, MOOCs, interactive notebooks, and animations), laboratory education (scaled down hardware models, hardware in the loop simulation, co-simulation, augmented/virtual reality, remote labs, and virtual labs), and classroom education, which can be enhanced with e-learning tools.

[More details](#)

EDDIE representatives participated at the “Girls’ Day” event.



As part of the RWTH pilot activities in Aachen, EDDIE representatives participated in Girls’ Day event that took place on the 27th of April 2023.

Girls’ Day is a career orientation day that takes place once a year open to all girls from the fifth grade to promote occupations mostly pursued by men.

In the context of the EDDIE project the Institute for Automation of Complex Power Systems (ACS) has participated in this event next to three other institutes of the RWTH and hosted girls to explain topics related to energy.

In preparation of the event a plug-and-play demo was prepared which is an advanced version of the wind park and energy grid demo deployed in the piloting activity Archimedischer Sandkasten with the city of Aachen.

This plug-and-play demo and a general presentation was used to explain how renewable energy sources influence the grid and how to control the interaction between electricity production and power consumption.

[More details](#)

EDDIE at the “Data Platforms for the Energy Infrastructure Workshop”.

Together with the Institute for Electro Mobility of the Bochum University of Applied Sciences, the RWTH partners organized a workshop on open source data platform the energy infrastructure in the IDEASFORUM e.V. of the City of Herne.

The workshop gave a general overview of the challenges of data management. The focus was on the presentation of smart city applications with FIWARE and Message Queue Telemetry Transport (MQTT) and the display of different functions with demonstrators. Part of the workshop, a general introduction to FIWARE as well as MQTT, practical examples and demonstrations of smart city applications and the presentation of smart energy business models have been included and parallels with the project have been drawn.



[More details](#)

EDDIE Project at the 6th Advisory Board Meeting.

On the 8th of June 2023, representatives of EDDIE Project - „Education for Digitalization of Energy“, the partners involved in the strategic implementation, important members and external experts, participated and contributed at the 6th online International Advisory Board (IAB) of the Project.

The 6th IAB meeting highlighted important and significant subjects for the development of the project such as the project status, the Pact for Skills – The Large-Scale Partnership for the Digitalisation of the Energy Sector and the strategy of the Blueprint.

Dissemination activities within EDDIE Project which includes social media interactions, exploitation of the results, Large-Scale Partnership workshop integrated into the European Year of Skills, participation in national events.

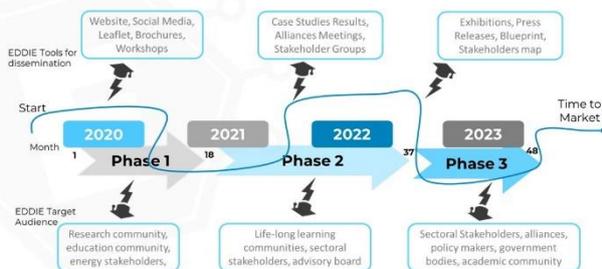


Regarding the pilot activities all the field tests are running according to the identified skills gaps and the activities designed to mitigate them in 6 different locations in Germany (Aachen, Herne, and Cologne), Greece, Italy, and Madrid.

Additionally, the IAB established the next steps on how the Eddie Entity will progress and how it will be used as part of The Large-Scale Partnership for the Digitalisation of the Energy Sector in order to have a good coordination between them.

With regards to the strategy, one of the final results will be the implementation of the “Training Programmes Marketplace” specialised in the digitalisation of the energy sector, which will integrate different project results such as the programmes template, the database, pilots, syllabus, etc.

Time-to-market



The consortium is currently focusing on the main outcomes of the project and how to maximize their value by considering also the European Commission direction and instruments.

More details

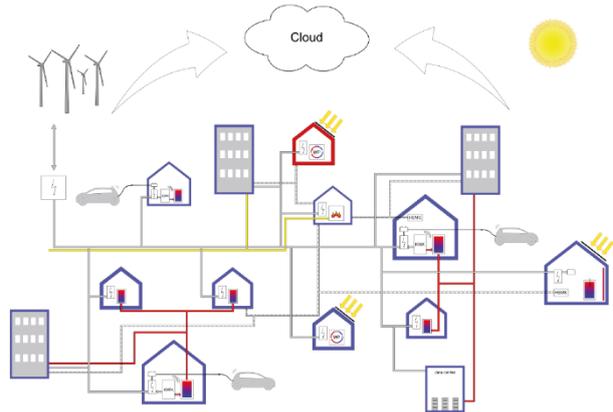
EDDIE Project at “The Future Energy Systems Lecture on Energy Digitalization”.

“Future energy systems lecture on energy digitalisation” is a Master level course and a highly interdisciplinary lecture series presented by different chairs. The lecture gives a comprehensive overview of the essential elements of the future energy system as well as important topics of sector coupling.

In this lecture series, the Institute for Automation of Complex Power Systems has one lecture on the topic “Digitalization of the Energy System” coordinated by Prof. Antonello Monti and below is showed a digitalized bidirectional distribution grid which have been included in the material.

During the course, EDDIE project insights and results have been mentioned based on the work conducted so far by the consortium.

[More details](#)



EDDIE’s pilot activities in Athens have been partially deployed.



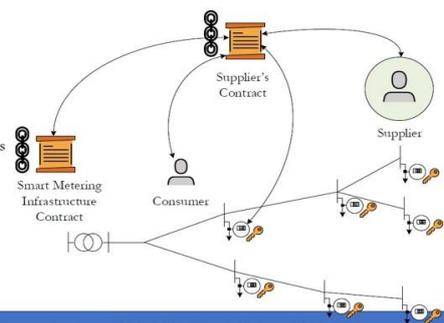
During May 2023 a major part of EDDIE’s pilot activities in Athens have been deployed by NTUA.

[More details](#)

Protocol Modelling using Smart Contracts

Security assumptions:

- The metering infrastructure operator can be trusted;
- The smart meters can interact with the blockchain; and
- The smart meters’ private keys cannot be recovered.



Digitization of Energy Systems, IPPS, ECE - NTUA, 25 May 2023

A set of lectures on local energy markets, energy communities and blockchain applications, and one on AI applications on energy systems about Dynamic security and forecasting have been presented to the students enrolled in the NTUA MSc program “Energy production and management” in the context of the course “Digitalisation of energy systems”.

EDDIE Project at the “IEEE PowerTech Belgrade 2023” Conference.

EDDIE Project participated at the IEEE PowerTech Belgrade 2023 conference organized and co-sponsored by IEEE, PES and School of Electrical Engineering Belgrade – University of Belgrade, and was held in Belgrade, Serbia between the 25th to 29th of June 2023.

Skill Gaps identification for the digitalization of the energy sector

A multidimensional methodology was developed to address skill mismatches between the **industry** and the **education and training providers**

European surveys (3): More than 100 answers from important organizations in EU addressing challenges and skills in the energy sector

Sector	Expertise Area	Intermediate (%)	Expert (%)
Power	Power	54%	35%
	Digital/Data	34%	23%
	Heating and Cooling	17%	13%
Digital/Data	Power	38%	30%
	Digital/Data	77%	24%
	Heating and Cooling	11%	8%
Heating and Cooling	Power	25%	21%
	Digital/Data	38%	30%
	Heating and Cooling	20%	23%
Data Capture and Management	Power	40%	41%
	Digital/Data	37%	4%
	Heating and Cooling	11%	40%

For the full analysis please refer to the following deliverables on [EDDIE](#) webpage
 D2.1 Current challenges in the energy sector and state of the art in education/training
 D2.2 Current and future skill needs in the energy sector

Mr. Panos Kotsampopoulos from NTUA partner presented the main results and findings of the EDDIE project with a focus on skill gaps identification for the digitalization of the energy sector. The importance of transversal skills in the digital transformation was also underlined.

[More details](#)

EDDIE published new summaries of the most recent deliverables.

EDDIE Consortium published on the project website summaries for the deliverables completed so far and approved by the European Commission with the intention to ease the user access to the main results of the work done. The deliverables presented below now have available short summaries on the EDDIE website.

- D4.2 – Report on Best Practice for Vocational Education & Training (VET)
- D4.3 – Report on Best Practice for University

Summary of D4.2 – Report on Best Practice for Vocational Education & Training (VET)

Summary of D4.3 – Report on Best Practice for University

[More details](#)

EDDIE published the D4.1 follow-up survey.

During “T4.1: Identification and assessment of skill delivery and professional knowledge to address digitalization”, the EDDIE project partners conducted an online survey between November and December 2021 to gather valuable insights and identify the main challenges the Vocational Education and Training (VET) systems are facing in the area of digitalization of the energy system and the associated demand for new skills. Overall, the survey was based on targeting key-informants (VET providers and/or experts) across Europe through an online questionnaire and its results can be found at the more details button.



D4.1 Follow-up survey

[More details](#)

EDDIE Project at the “Smart Energy Solutions for the Energy Transition” Conference.

EDDIE Project co-organized the Smart Energy Solutions for the Energy Transition conference together with Bochum University of Applied Sciences, RWTH – Aachen University and E.ON Energy Research. The event took place on the 24th of May 2023 and addressed the important role of open-source data platforms and business models for the necessary change in the energy grid as part of the energy transition.



The open-source technologies MQTT (Message Queuing Telemetry Transport) and FIWARE for use in smart energy networks will be presented. For this purpose, a physical demonstrator is presented in each case, which is used to illustrate the functions and fields of application.

In addition, the development of business models in connection with Smart Cities will be discussed.

Based on the skills gap analysis, education and training solutions, the implemented data base to support a strategic map of stakeholders and the deployment of several demos and pilots, EDDIE project offered valuable inputs on the topic of smart energy solutions for the energy transition.

[More details](#)

EDDIE Project at “The European MOOCs Stakeholder Summit”.

On the 14-16th of June 2023, EDDIE Project participated at The European MOOCs Stakeholder Summit which was held as a hybrid conference.

POLIMI partners representative – Daniela Casiraghi presented the poster on the” Skill gap analysis and Esco Framework: the MOOC design process in EDDIE project” – a poster designed by D. Casiraghi, B. Santolini, and A.Tomasini.

The Hasso Plattner Institute for Digital Engineering welcomed participants from all over the world to Griebnitzsee campus in Potsdam near Berlin.

The main topics were the following:

- Impact of the pandemic on digital education - Digital education, whether micro-credentials, MOOCs, blended learning formats, or other e-learning tools, received a major boost.
- Formalization of digital learning - currently seeing how the formerly informal MOOC offerings are becoming more and more formalized and embedded in existing ecosystems.
- MOOC networks and cooperations - Cooperations and networks such as MOOChub, the European MOOC Consortium, and the Common Micro-Credential Framework not only make MOOC research and developments more visible but also are an important building block for more standardization of formats and metadata.

EMOOCs European MOOCs Stakeholders Summit 2023

Skill gap analysis and Esco Framework: the MOOC design process in EDDIE project
D. Casiraghi, B. Santolini, A. Tomasini

#ENERGY #DIGITALISATION #EDUCATION #SKILLS #MOOCs

EDDIE Education for Digitalization of Energy

Education for Digitalization of Energy – is an Erasmus+ project funded by the European Commission within the Sector Skills Alliances (SSA) framework to develop a self-sustainable long-driven strategy (Blueprint) for the digitalization of the Energy.

Goals

- Contribute to the evolution of the training ecosystem to include the required digital skills into the Vocational Education and Training (VET) and beyond.
- Contribute to an effective re-training in digital skills of the current and future workforce.
- Improve the attractiveness of the Energy Sector as a career choice for a digitally skilled workforce.

Pilot Activities

- in 5 different countries
- with different targets
- with different training methodologies

How to design a MOOC targeting specific professionals willing to upskill or reskill their competences?
Which content for “Real Estate Managers”?

Definition of the skills to be addressed
ESCO Platform esco.ec.europa.eu/en
Definition of the Intended Learning Outcomes

1 Skills' gap identification

REPORT

- Current challenges in the energy sector and state of the art in education/training
- Current and future skill needs in the Energy Sector

2 Target definition: Energy manager

3 Skills selection

MOOC

Energy management for real estate
Fundamentals, methods and digital tools

Explore the skills and competencies needed to become an energy manager.

4 weeks
12 hours of total workload
1 webinar and case study

www.eddie-erasmus.eu/
www.pok.polimi.it

Enroll in the MOOC

[More details](#)

EDDIE PROJECT STILL IN THE LIMELIGHT AFTER MORE THAN 3 YEARS OF ACTIVITY

The EDDIE Project is approaching its end, and after 3.5 years of activity combined with the hard work of the consortium, it still continues to reach a diverse and large audience. Recently, the outcomes of the project were showcased during the European Sustainable Energy Week 2023 (EUSEW) conference that took place between the 20th and the 22nd of June 2023. As such, these references are demonstrating the high relevance of EDDIE’s activity in the energy sector.



During the "Revision of the Strategic Energy Technology Plan: boosting skills and competitiveness in clean energy technologies" panel, Maria Laura Trifiletti – coordinator of the European Technology and Innovation Platform Smart Network for Energy Transition (ETIP SNET), mentioned the EDDIE project and its results in terms of skills. She underlined that the consortium has identified on the technical side, skill gaps like cloud services, digital platforms, cybersecurity and communication technologies.

During the panel discussion on the "Upskilling the EU’s industrial workforce to create clean energy systems for electric mobility" Tzeni Varfi – Principal at the European Association representing the leading Distribution System Operators (E.DSO), spoke about digitalisation in general, and commented on how the EDDIE project is a relevant source of information in terms of skill needs, coverage and gaps.

Therefore, considering these showcases, the project is useful for the people, institutions and companies that investigate skill gaps and work towards the digitalisation of the energy sector. The project partners hope that their activities and findings will play a greater role in such events even when it comes to taking critical and high-impact decisions.



[More details](#)

Relevant Events for EDDIE Ecosystem.



During April, May and June, EDDIE project representatives participated at a series of events relevant for its ecosystem as it is presented further:

- The “Unpacking the Green Deal Industrial Plan: Energy Industry implications” (18 April 2023)
- The EURASHE Annual Conference (8-9 June 2023)
- The InnoGrid 2023 “Between urgency and energy transition: getting the balance right” (9 June 2023)
- The 27th edition of CIRED 2023 (12-15 June 2023)
- The joint Cedefop/OECD symposium on “Apprenticeships and the digital transition” (15-16 June 2023)
- The Greenovation (19 June 2023)
- The Eurelectric Power Summit – Balance of Power (20-21 June)
- The Microcredentials – a labour market megatrend (22-23 June)
- The 2nd Education and Innovation Summit (27 June 2023)

[More details](#)

EDDIE project consortium

