



Education for Digitalisation of Energy

Newsletter no.6 – April, May, June 2021

Description and Benefits

EDDIE is a four-year (starting January 2020) Erasmus+ European Union funded collaborative project creating a Sector Skill Alliance (SSA) to develop a long-driven Blueprint for the digitalization of the European Energy sector. The Consortium is coordinated by COMILLAS and brings together 16 partners from 10 EU Countries.

The challenge of the project is to develop a long-driven Blueprint for the digitalization of the European Energy sector to enable the matching between the current and future demand of skills necessary for the digitalization of the Energy sector and the supply of improved Vocational Education and Training (VET) systems and beyond.

Digital Energy Education

Briefly

Title: Education for Digitalisation of Energy

Type of action: Sector Skill Alliance

Topic: EPP-1-2019-ES-EPPKA2-SSA-B

Grant Number: 612398

Total Cost: € 3,995,690.00

EC Contribution: € 3,995,690.00

Start Date: 01/01/2020

End date: 31/12/2023

Duration: 48 months

Project Web Site: www.eddie-erasmus.eu

Key Words: Digitalization, Energy, Education, SSA, VET

Project Coordinator: COMILLAS

With the support of the
Erasmus+ Programme
of the European Union



Project Objectives

1. **Develop** a European Sectoral Skills Alliance
2. **Implement** improved/new qualifications in national VET and beyond systems.
3. **Fostering** the collaboration and mobility among European training centres, universities, and industries.
4. **Provide** a sustainable framework that allows education providers to define and update educational programs responding to industry changes.
5. **Improve** the attractiveness of the Energy sector as a career choice

Concept and approach

The objective of the project to develop a Blueprint Strategy for the Digitalisation of the Energy value chain (BSDE), will be based on the sustainable cooperation between key industry stakeholders, education and training providers, social partners and public authorities. The BSDE is an industry-driven strategy that will meet and anticipate the skills' demands for the sustainable growth and digitalisation for the European Energy sector. This new strategic approach will reinforce the competitiveness of the European Energy Sector in an efficient and innovative way by creating a highly skilled workforce.

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EDDIE at the "IEEE PES PowerTech 2021" virtual workshop

EDDIE project participated in the "IEEE PES PowerTech 2021" virtual workshop organized in June by IEEE PES with the support of Comillas University. During the event, Panos Kotsampopoulos of the EDDIE's partner National Technical University of Athens, gave a presentation about "Emerging Needs and Tools in Power System Education". The presentation mainly focused on the new educational and training needs, the results of EDDIE's industry and education surveys on the digitalization of energy, and the new technical tools for education and training. If we examine the latest educational and training needs, we come to the conclusion that there is a demand for new skills and expertise to foster the energy transition, a broader understanding of topics of different domains is necessary (i.e. electric power, heat, markets and definitely ICT where a holistic understanding is needed) as well as interdisciplinary approach and understanding of interactions. Finally, new educational approaches like lectures combined with simulations, e-learning, laboratories etc. are necessary. Regarding the skill gap surveys on industry and education we conclude that there is lack of adequate skills of employees which is a challenge for the industry and skill gaps converge towards data management and analysis, big data, cybersecurity, and programming & development competences. The "Power" sector showcases the biggest skill gaps which is possibly linked with the increase of distributed energy recourses, smart grids, etc.

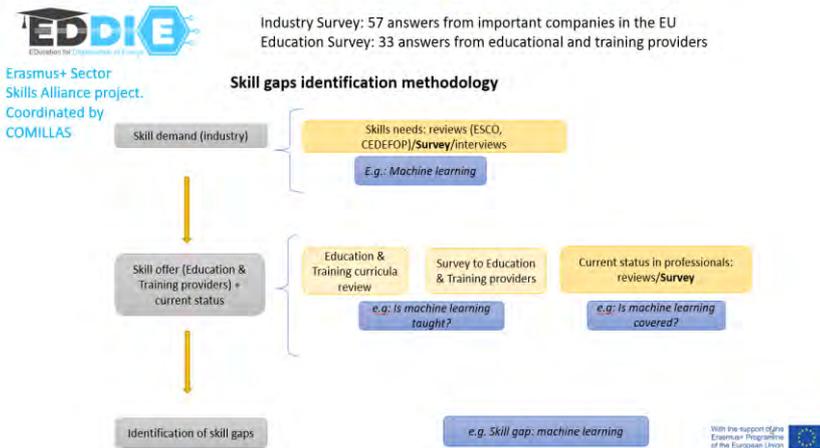
PowerTech MADRID 2021

POWER FOR THE SUSTAINABLE DEVELOPMENT GOALS
JUNE 28TH-JULY 2ND 2021, MADRID, SPAIN

GOES VIRTUAL



Industry/academia surveys on the digitalization of energy



[More details](#)

Apart from the technical skills and competences, it was pointed out that the transversal, business, and green skills are very important in the energy sector. Finally, the technological advancements can revolutionize education by providing a variety of tools for education. These tools can be E-learning tools (Webinars, Massive Open Online Courses (MOOCs), Interactive notebooks, Animations, Virtual labs, Remote labs) or tools for laboratory education (Scaled down hardware models, Hardware in the Loop simulation, Co-simulation (e.g. ICT and power system), Augmented/virtual reality). Classroom education can be enhanced with e-learning tools (e.g. remote connection to lab to show some experiments, students use smart phones etc) and the boundaries between classroom and laboratory education can become more flexible.

EDDIE Interviews Serie: online video conversation with guests from REPSOL, IBERDROLA and PADRE PIQUER partners.

The interview series of EDDIE project continued in 2021 with guests from REPSOL, IBERDROLA and PADRE PIQUER partners.

EDDIE Interviews

"[For] identifying specific profiles for new roles (e.g. data scientist, data translator, etc.) [...] first, [the company] must define these profiles, then to associate capabilities to them, and in the end to identify those persons in the company that can be re-skilled according to new needs & positions."

MARTA DEL MAZO ROQUERO
LEARNING & TRAINING DR. MANAGER OF REPSOL

"However you call it, Corporate University, content factory or learning strategy, a base structure is mandatory. In this way you can rely on a solid foundation and you can provide to your internal customers the facilities that they are looking for, but do not get hold onto those structures. Because you must change, and you must adapt."

ERNESTO BARRIOS
MANAGER OF REPSOL

EDDIE Education for Digitalisation of Energy

REPSOL

With the support of the Erasmus Programme of the European Union

Interview hosted by CRE Centro Tecnológico de Energía

EDDIE Interviews

"I believe EDDIE will be the first project tailor made for the digitalization of the whole energy value chain and it also applies an industry driven approach, which will not only be materialised on a strategy along the project, but it will be demonstrated and validated in a pilot environment."

MARÍA LUZ CRUZ APARICIO
INNOVATION MANAGER

"Technologies, such as AI, IoT or blockchain, are being adopted by the energy sector and they can enable to overcome the challenges of integrating more renewables. [For example] we have been working with machine learnings for more than 10 years to detect internal and external damages in the blades of the wind turbines."

JOSE MARÍA GALLARDO CALLES
DIGITALIZATION & INNOVATION SENIOR MANAGER

EDDIE Education for Digitalisation of Energy

IBERDROLA

With the support of the Erasmus Programme of the European Union

Interview hosted by CRE Centro Tecnológico de Energía

EDDIE Interviews

"Some of the difficulties that come up when governments try to deal with digitalization, is that they are not capable to do radical changes in the education programs easily. Companies in Spain like Iberdrola, Repsol etc. have their own specific programs that match with their needs, but small and medium size enterprise have much more difficulties to adapt. Also, the development of the skills and VET programs required more time to be updates and it is also needed to train teachers and educators."

GUILLERMO RODRIGUEZ MARTINEZ
TECHNOLOGY & VOCATIONAL TRAINING PROFESSOR

VOCATIONAL EDUCATION & TRAINING

EDDIE Education for Digitalisation of Energy

Centro de Formación PADRE PIQUER

With the support of the Erasmus Programme of the European Union

Interview hosted by CRE Centro Tecnológico de Energía

The interview series of EDDIE project continued in 2021 with guests from REPSOL, IBERDROLA and PADRE PIQUER partners. The representatives of the global multi-energy provider REPSOL shared from their substantial expertise in learning and training, by addressing topics like learning strategies or capabilities mapping of the personnel. From the experts in digitalization and innovation from IBERDROLA we heard great opinions on the sustainability of the project' outcomes as well as multi-disciplinary approach on education. The representative of PADRE PIQUER, a technology and vocational training professor, expressed his view on digitalization of the energy sector. He provided information about vocational education and training and the relationship between different stakeholders of the energy sector (e.g. companies and academia).

[More details](#)

EDDIE Project participated at the 10th INNOGRID EDITION - "Living the Transition" - virtual event

EDDIE Project participated at the 10th InnoGrid Edition - "Living the Transition", jointly organized by the Association of the European Distribution System Operators (E.DSO) and the European Network of Transmission System Operators for Electricity (ENTSO-E), on Friday 4th and 11th of June 2021.

With a long history on European innovation, InnoGrid 2021 event has been a source of information and inspiration, through the most pressing topic of the moment – energy transition.

Having the opportunity to learn more about how other EU funded R&D projects work on innovative solutions related to digitalisation (and not only), helped the EDDIE team to refine its view on how to tackle the subject of education for digitalization of energy sector.



[More details](#)

EDDIE Consortium publishes monthly blogs addressing emerging technologies, for the digitalization of the energy sector.

Every month of the project, 4 blogs will describe the latest technologies in energy sector also related to digitalization of the energy sector. For a successful yet practical way of interacting with the stakeholders and public, all blogs will be posted on EDDIE website under a dedicated page with references to LinkedIn and Twitter.



Latest topics include “Enabling Sustainable Energy Communities”, “Digital Transformation: The Key Role MOOCs”, “New Digital Pedagogies on the Horizon: SLEW- Second Life for ENERGIEWENDE”, “Digitalization of Education and the Fight Against the Social Crisis Generated by COVID-19”, “Digital Education Action Plan 2021-2027 Proposed by European Commission”; “Repsol Develops Smart Energy Management System that Improves Customer Efficiency”.

[More details](#)

EDDIE Project Organized the 2nd INTERNATIONAL ADVISORY BOARD

The 2nd International Advisory Board (IAB) was organized by the Project Coordinator COMILLAS, on Thursday, 10th of June 2021. The IAB plays a key role as an independent external quality consultant in the project, and it is providing requirements and inputs on goals and issues, monitoring project milestones and supporting with final feedback on results and future expectations in other sectors and other blueprints.

The 2nd International Advisory Board highlighted important and relevant topics for the current state of the project, best practices in education, blueprint strategy, stakeholder database, and dissemination activities.

Since quality assessments are performed throughout the entire implementation period together with project progress reports, the focus during the meeting was also on the assessment of the First Technical Progress Report which received positive reaction from the European Education and Culture Executive Agency (EACEA).

Moreover, the path and strategies towards a new context of Education for Digitalization of Energy Sector, exploitation of the results, website, and social media interactions, were topics on the 2nd IAB meeting agenda.



During the 2nd IAB it has been decided that the future Sector Skill Alliance will not only be based on focus countries, but also will consider particularities of regions in transition when it comes to upskilling and reskilling needs as those regions are moving to cleaner forms of energy, pathways to a climate neutral society and economy.

Based on such examples, EDDIE shall be in the position to elaborate and disseminate “best practices” and “success stories”. The identification of skill gaps will be assessed for a broader geographical coverage, including other fields of energy with the aim of improving the relevance of the activities and innovation in the holistic approach.

[More details](#)

EDDIE Project participated in the Launch of the New Manifesto for Enhancing Digital Competences across Europe.

Eddie Project participated on the 6th of May on the online event – Launch of the New Manifesto for Enhancing Digital Competences across Europe organized by ALL DIGITAL, who represents more than 25.000 digital competence centres across EU. The manifesto seeks to contribute to dialogue, implementation, and cooperation on the EU actions to deliver Europe’s digital future.

Through the building blocks of the manifesto, we can enumerate: the education and training offer, access to education and training, quality of education and training, a European approach to digital competences, sustainability and development. Each of these categories was presented in detail during the event.



[More details](#)

An important part of the meeting offered insights from the digital world through testimonials from the EU Commission, industry, European networks, and All Digital Members.

EDDIE Project participated in the EURASHE 30th Annual Conference related to Professional Higher Education

Eddie Project participated in the Eurashe 30th annual conference focusing on „Professional Higher Education for Sustainable Development: Creating a Change that Endures” on 20-21 May. The conference was structured along the five pillars of Agenda 2030: People, Planet, Prosperity, Peace and Partnerships.

The main aim of the conference was to build up a set of Specific Recommendations and discuss a potential Action Plan for their implementation by professional higher education and its stakeholders over the next years.

Panel discussion on „European Universities initiatives” and „Profesional higher education for smart and sustainable recovery”, were part of the programme.

[More details](#)

EDDIE Project wrote Deliverable D3.1 – “Identification of Stakeholders in each Area”.

Work Package 3 (WP3) team has been working in the previous months on realizing the first deliverable of the WP and it is currently under European Commission evaluation.

This deliverable addresses the current situation in the Energy Sector and its digital transformation. It aims to Desk research and to identify institutions, companies, organizations and all other interest groups that are relevant to the energy transformation system in Europe evaluating their influence and interest in the process. The result of the Stakeholder identification is presented in a first version of the online database annexed to this deliverable.

Organization Name	Type of Business	Size of the Company	Main Sector of Activity	Type of Technology	Country of Headquarter	Continent of Operation	Country(s) of Operation	Organization Email address	Company Website URL	Twitter	LinkedIn
All Rights	Association	Small (<250 Employees)	Associations & Communities	Technology	Belgium	Europe		info@allrights.org	http://allrights.org		
Association for Teacher Education in Europe (ATEE)	Associations	Small (<250 Employees)	Associations & Communities	Education	Belgium	Europe		secretariat@teee-education.org	http://teee-education.org		
European Digital Learning Network (EDLN)	Association	Small (<250 Employees)	Associations & Communities	Technology	Italy	Europe		info@edln.eu	http://edln.eu		
European Association for the Education of Adults (EAEA)	Associations	Small (<250 Employees)	Associations & Communities	Education	Belgium	Europe		cases@eaea.org	http://eaea.org		
European Network of Technical and Vocational Education and Training (ENTVET)	Association	Small (<250 Employees)	Associations & Communities	Education	Belgium	Europe		etvet.office@entvet.org	http://www.entvet.org		
ENTVET	Association	Small (<250 Employees)	Associations & Communities	Energy	Belgium	Europe			http://www.entvet.eu/entvet		
European Association of Institutions in Higher Education (EUA/EHEU)	Association	Small (<250 Employees)	Associations & Communities	Education	Belgium	Europe		eua@eua.be	http://www.eua.be		
European Association of Institutes for Vocational Studies (EIVS)	Association	Small (<250 Employees)	Associations & Communities	Education	Belgium	Europe, Asia, Vietnam, Belgium		general@eivsvietnam.org	http://www.eivsvietnam.org		
Local Energy Distributors Association in Europe (LEDCE)	Association	Small (<250 Employees)	Associations & Communities	Energy	Belgium	Europe			http://www.gode.eu/ledce		
EFMD Equis Accredited Programme for Business Administrators (EPA)	Association	Small (<250 Employees)	Associations & Communities	Education	Belgium	Europe		info@epa.be	http://www.equa.be/epa/		
Association for Local, Urban and Metropolitan Technology (Technical Support for Smart Growth Strategy) (ALUMTS)	Association	Small (<250 Employees)	Associations & Communities	Energy	Germany	Europe			http://www.alumts.com/en		

Figure 1: Initial Stakeholder Database Prototype

Deliverable D3.1 - “Identification of Stakeholders in each area” is reuniting the following three parts:

- Deliverable 3.1 – the document
- Online Database
- Stakeholder List

Figure 2: Draft Application to become an EDDIE member.

First a stakeholder list has been created, identifying all of the relevant stakeholders for the Eddie Project. They have been divided into 5 different categories (Industry, Education, Administration, Associations & Communities, Individuals) and then subdivided into subcategories for its analysis. an online database has been created as a way of sharing and presenting the desk research done for the stakeholder identification process.

This database has been developed and updated in order to adapt to future user needs and for it to be a useful source for the members that apply to become part of it. Research was made to develop both an automated and elegant database, making it visual, efficient and attractive for future users. Future steps for the database have also been identified and described in the document. Finally future steps have been identified to continue with the Work Package 3 demands. The next deliverable of WP3 is D3.2. – “Stakeholders’ map in order of importance within each area” and considers the representation of a visual map, presented as a grid or matrix that show influence and interest. More information about the D3.2 will be presented in the next newsletter.

More details

EDDIE Project participated at the Power Summit 2021 - Electric Decade

EDDIE Project participated at the Power Summit 2021 - Electric Decade, organized by EURELECTRIC, on 25th and 28th of May 2021. The Event highlighted important topics such as: Energy Transition, Renewable Heating Solutions, Hydrogen, Digital & Data, Innovation, Digital Jobs and Digitalisation.

Europe's premier power sector event recognised as the "Electric Davos" is the leading forum where the European power sector ecosystem connects industry captains, politicians, business disrupters, investors and academics.

Participants were able to participate in inspiring and interactive sessions and debates and enjoy a rich exhibition dedicated to the energy sector.



[More details](#)

EDDIE Project participated at the Workshop on Analysing and Comparing VET Qualifications

 CEDEFOP | European Centre for the Development of Vocational Training



Workshop on
**analysing and
comparing VET
qualifications**

18 June 2021
Virtual event

#VETQualifications

EDDIE Project participated at the Workshop on Analysing and Comparing Vocational Education and Training (VET) Qualifications, organized by the European Centre for the Development of Vocational Training (CEDEFOP), on 18th of June 2021.

The Workshop presented the final findings of the CEDEFOP Project - Comparing vocational education and training qualifications: towards a European Comparative methodology.

This Event allowed for a discussion on how to strengthen the feed-back-loop between education and training and the labour market; and thus provide a better link between the supply and demand of skills and qualifications.

Moreover, the Workshop presented a series of use-cases where a systematic analysis and comparison of learning outcomes can support researchers, policy makers and practitioners involved in the development as well as review and renewal of skills and qualifications.

[More details](#)

EDDIE Project continues the Dissemination, Exploitation and Policy Recommendations plan with Policy Briefs and EU Strategies

Based on the work conducted in WP4 - Assessment of policies and requirements for VET and beyond, under the leadership of RWTH partner, the Eddie Project team decided to add a new component to the dissemination strategy.

Considering all the current and future changes in the energy sector with consequences on the education and training area, addressing the existing policies and EU strategies is mandatory. It is great opportunity to present the finds of our research work by offering information on the relevant papers. Therefore, the partners involved in WP4 will create a summary of the existing documents.



In this regard, it can be mentioned the following titles:

- European Strategic Energy Plan (SET-Plan)
- Strategic Energy Technology (SET) Plan Roadmap on Education and Training
- Digitalisation and Energy (REPORT IEA 2017)
- European Commission - Advanced Technologies for Industry
- Assessment and roadmap for the digital transformation of the energy sector towards an innovative internal energy market

[More details](#)

EDDIE project consortium

We are happy to announce that **NTT DATA, who officially joined the efforts of the EDDIE** at the beginning of April, started its first activities inside the project. The company uses information technology to create new paradigms and values, which help contribute to a more affluent and harmonious society. The EDDIE team is looking forward to having a close and fruitful collaboration.

The project consortium is led by **Universidad Pontificia COMILLAS Spain**, EDDIE consortium brings together **16 partners from 10** EU member states and associated countries. Representatives of nine European energy utilities, end-user organisations, industry, SMEs, research and academia from Spain, Greece, Cyprus, Germany, Italy, Sweden, Romania, France, Belgium, Luxemburg, comprise the project consortium.

