



## Education for Digitalisation of Energy

Newsletter no.15 – July, August, September 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 at “The 2023 IEEE Power & Energy Society (PES) General Meeting”.

On the 18<sup>th</sup> of July 2023, during the 2023 IEEE Power & Energy Society General Meeting that took place in Orlando, USA, Prof. Nikos Hatziaargyriou delivered a presentation titled “Navigating the digital energy transition: Emerging skill needs and educational tools”.

The first part of the presentation provided insights from the ongoing project EDDIE (Erasmus+), regarding the methodological approach to anticipate skill needs, as well as key takeaways of the emerging skill gaps needed to support the digitalization of the energy sector.

Then, the presentation focused on the national project APEX (funded by H.F.R.I.) and the importance of educating students about energy systems, along with highlights of the project actions.

Following, the objectives and operation of IEEE PES Task Force on Innovative Teaching Methods for Modern Power and Energy Systems were introduced.

**Skill Gaps identification**

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 (60% industry, 40% education) from major stakeholder organizations in EU addressing challenges and skills in the energy sector

**Education and engagement at a young age**

Educating students about energy systems can increase awareness and engagement, which can support the energy transition.

- Create energy aware citizens
- Enhance the engagement of prosumers and active consumers
- Incentivize future professionals to work on energy systems

The APEX project in Greece has created two Smart Management Hubs of Renewable Energy Sources and Energy Efficiency at secondary education schools.

- Students participate in engaging workshops to familiarize with different aspects of smart grids and energy efficiency.
- Participatory construction of a small wind turbine.
- Teachers are also trained to perform the workshops.
- Disseminates knowledge to other visiting schools

**IEEE PES Task Force on Innovative Teaching Methods for Modern Power and Energy Systems**

Aims to **investigate, create, and promote the use of innovative teaching methods and material** in modern power and energy systems.

Operates in the framework of the University Education Activities Subcommittee of the IEEE PES Power and Energy Education Committee (PEEC)

The TF addresses:

- New trends in **laboratory education** for modern power and energy system
- Transforming the power and energy classroom: **blended learning and e-learning tools**
- **Advanced teaching methods** for power and energy systems based on engineering educational research
- Identification of gaps between the current skill/competence needs of the industry and the output of universities.

70 members from 25 countries  
Will produce an **IEEE PES Technical Report** in the next months

Chairs: Panos Kotsampopoulos, Nikos Hatziaargyriou

**Experiences of using advanced technical tools**

- Hardware in the Loop (HiL) simulation: Connection of hardware equipment (e.g. relays, inverters) to a power system simulated in a digital real-time simulator
  - Provide students with hands-on experience with real hardware, while maintaining the advantages of the digital simulation (flexibility etc.)
- Experiential education: educators engage their students directly on the object of knowledge and later on to a focused reflection about that experience.
- Virtual and remote lab: Web based tool used especially during the pandemic. Mathematical representation (virtual) or access to SCADA (remote) of the NTUA lab.
- Jupyter notebook for power flow analysis: the **theory** is analytically explained above the **source code** and the **results** are being displayed below the code

**More details**

The Task Force, chaired by Panos Kotsampopoulos and Nikos Hatziaargyriou addresses innovative teaching methods and material in modern power and energy systems and promoting advanced technical tools for education and training.

The presentation concluded by highlighting the key takeaways from the hands-on experiences of using advanced technical tools (Hardware In the Loop, virtual and remote labs) gained in the context of the ERIGrid 2.0 project (H2020).

## EDDIE Project Participated at the “6th Event On Cybersecurity 'European Energy Grids' Security In A Changed Landscape”.

Eddie representatives participated at the E.DSO-ENCS-ENISA-ENTSO-E 6th Event on Cybersecurity 'European energy grids' security in a changed landscape – closing the skills gap and getting prepared' which was held on 21 October 2023.

The Association of European Distribution System Operators (E.DSO), the European Network for Cyber Security (ENCS), the European Union Agency for Cybersecurity (ENISA) and the European Network of Transmission System Operators for Electricity (ENTSO-E), together hosted a public conference on power grids cybersecurity in Athens on Thursday 21 September.

The event was also held in partnership with the European Energy - Information Sharing & Analysis Centre (EE-ISAC) and was organized as part of the cybersecurity week of ENISA.

# CONFERENCE ON POWER GRIDS' CYBERSECURITY



This year the conference brought together experts in the field of grid cybersecurity to exchange on the latest developments in the threat landscape and how realistic exercising can develop better skills and increase preparedness for cybersecurity incidents.

Are we prepared for large scale cyberattacks to the European grid? Will upcoming European regulations on cybersecurity help to effectively and efficiently increase preparedness or are there still pitfalls and gaps that require attention? These and other topics were tackled during the event, together with concrete case studies of network attacks.

[More details](#)

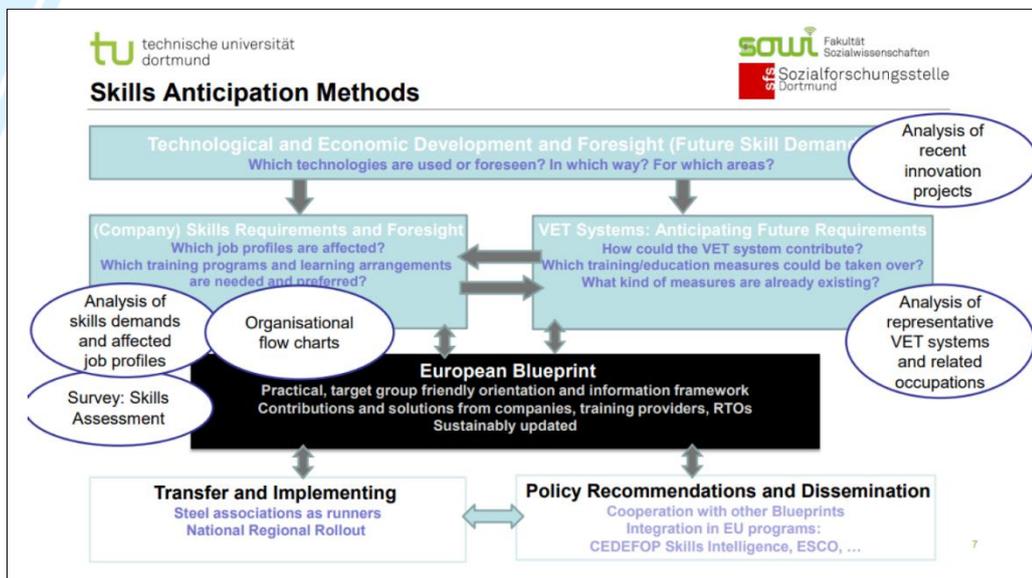
# EDDIE Project at the “Sectoral skills intelligence and strategies as drivers of the just transition”.

EDDIE representatives participated at the "Sectoral skills intelligence and strategies as drivers of the just transition" event on the 26th of September 2023. The event has been organized by European Centre for the Development of Vocational Training (CEDEFOP), to address the need of having a skilled workforce to accelerate the just transition.

The main objective of the Cedefop’s 3rd virtual get-together welcomed sectoral actors, VET providers, guidance practitioners and other actors to exchange experience with sectoral skills intelligence stemming from skills anticipation methods and identify opportunities and challenges for using it “in the front line”. The role of sectoral skills intelligence in supporting the design and improvements of sectoral skill strategies has also been discussed.

The poster features the CEDEFOP logo (European Centre for the Development of Vocational Training) and the 'EUROPEAN YEAR OF SKILLS' logo. The main title is 'Sectoral skills intelligence and strategies as drivers of the just transition' with the subtitle 'Supporting frontline actors'. It is for a 'Cedefop virtual get-together' on '26 September 2023' from '10.00-12.00 CET'. The graphic includes icons of people and a gear.

Relevant and targeted vocational education and training (VET) programmes need to reflect insights of skills anticipation methods (such as skills forecasts, skill foresights, employee and employer surveys, big data analysis). Particularly in times of increased volatility and economic pressures, economic sectors are the hubs of change and innovation that can enable a just twin transition. A mix of suitable skills anticipation tools and methods, availability of data, capacity to handle and “translate” the data into actionable and policy steps are crucial.



Sectoral skill strategies, built on high quality sectoral skills intelligence, place relevant stakeholders at the driver’s seat and call for a holistic skills governance approach, founded on comprehensive skills ecosystems.

[More details](#)

## EDDIE representatives participated at the “READY4DC – InterOPERA Joint Event”.



On the final READY4DC and the InterOPERA first dissemination event on 13 September in Vienna, during the CIGRE B4-Colloquium, the main findings of the READY4DC whitepapers and InterOPERA's work towards interoperable, multi-vendor HVDC grids were discussed.

A synergy of the project Ready4DC with EDDIE is the aim to identify and boost the needed skills in education towards HVDC topics within the frame of digital energy. During the event, an educational survey on this topic was conducted with the help of the preliminary work of EDDIE.

Specialists from InterOPERA gave an overview of the different project activities leading to the interoperability of multi-vendor HVDC grids – as well as the main findings of the report “Demonstrator project definition and system design studies”. Then the experts from READY4DC showcased the main findings of the final READY4DC whitepapers.

[More details](#)

## EDDIE Representatives at the “Smart City Day” Event.

On 21 and 22 September 2023, guests from business, research, innovation and society met for the Smart City Day at the Mulvany Villa in Shamrockpark in Herne, Germany. The two-day event made the topic areas of artificial intelligence, modern mobility and smart energy tangible and designable for the 21st century.

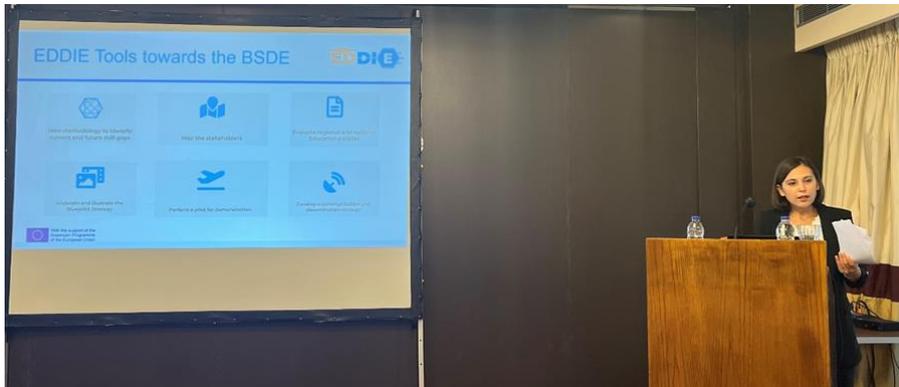
The event included the German-speaking FIWARE network meeting, the "Digital.Herne.Business" event, the "Smart City Summit" of the Ruhrvalley innovation network, as well as exhibitions and information for citizens and students on projects and current plans.

Also, EDDIE was part of the exhibition and displayed the LEGOS model, which was also deployed in the pilot activities “Gymnasium Workshop”, “Workshop on Data Platforms for the Energy Infrastructure and “Science Night at RWTH in the Aachen pilot site.



[More details](#)

# EDDIE Representatives at the “ERASMUS+ DAYS 2023” Event.



NOVEL Group SARM partner participated in the ERASMUS+ DAYS 2023, where education and innovation converged for a day of learning and inspiration. The event was held at the Brown Acropolis Hotel in Athens on September 22, 2023, and the day was filled with engaging discussions and presentations on sustainable practices and innovation.

NOVEL Group SARM partner had the opportunity to showcase the EDDIE project, which is dedicated in shaping the digitalization of the European Energy sector. NOVEL provided a comprehensive overview of the EDDIE project, highlighting its mission to develop the Blueprint Strategy for the Digitalisation of the Energy value chain (BSDE). Their aim is 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. The esteemed partners who form the backbone of the consortium had been introduced and their commitment to offering their expertise to successfully achieve the goals of the project. Finally, NOVEL shared an overview of the EDDIE Tools that have been used towards the BSDE.

Following the presentations, ERASMUS+ DAYS 2023 continued, featuring discussions on innovation and green entrepreneurship and a captivating photography exhibition. The primary objective of ERASMUS+ DAYS 2023 was to foster discussions and interactions surrounding various facets of education and entrepreneurship. Of course, there was also time for a delightful coffee and light lunch break, fostering networking and idea-sharing among attendees.

Overall, ERASMUS+ DAYS 2023 offered a platform for meaningful discussions, collaborative networking, and knowledge sharing. It was a privilege to engage with educators, professionals, and stakeholders who share our passion for shaping the future of education.

[More details](#)

## EDDIE project consortium

