Joint Public Webinar on Electrifying Europe: Perspectives from the Industry and Grid Operators on Skilled Workforce as a Supply Chain Bottleneck (ENTSO-E, T&D Europe, DSO Entity, Europacable) 15 May 2025 | 10.00 – 12.00







DCOO ENTITY DSOS FOR EUROPE

entso Reliable Sustainable Connected

Housekeeping rules





The webinar is recorded Video and material will be available public.



All participants are muted by default no camera (except speakers)



No questions in the chat, no hand raise Please use slido for Q&A



Welcome

The energy transition will stall without the people to deliver it. This is no longer a future risk—it's a current roadblock

- 88% of TSOs, representing 364 million people identified skilled workforce as a supply chain bottleneck.
- □ IEA indicates a 1.5 million job gap in the power grid sector until 2030 worldwide.
- □ The EU highlights that the energy transition will create over one million new jobs by 2030, but there's a major shortage of skilled workers.

Without industry-wide efforts to recruit and train hundreds of thousands of people, Europe risks missing climate targets and damaging its industrial competitiveness.













Agenda

Time	Торіс	Who
10.00 - 10.10	Welcome	Branislav Pilát, ENTSO-E
10.10 - 10.20	European Commission Perspective	Ilija Jovančević, European Commission, Directorate General for Energy
10.20- 11.00	Best Practices from Grid Operators	Florent Rivoire - Head of Employment Department, RTE Alexandre Sine - Program Director, Grids Schools for Energy transition, ENEDIS Melina Halili, Recruitment Department, Amprion
11.00 - 11.30	Best Practices from the Industry	Marina Durrer, Semiconductor Sales Manager, Hitachi Energy Pedro Moreno, Senior Trainer Siemens Power Academy, Siemens Evripidis Karatsivos, Director Products Engineering, NKT Marco Marelli, Transmission System Engineering VP, Prysmian Valentina Cortesi, Transmission HR People Development Manager, Prysmian
11.30- 11.50	Questions & Answers	All Participants
11.50- 11.00	Conclusion	Branislav Pilát, ENTSO-E









Participants can participate and ask questions via slido.com using the code #1127241 or scan the QR code below.



Slido Questions









European Commission Perspective









Skills as a supply chain dimension in the energy sector

Union of Skills

Ilija Jovančević Infrastructure and Regional Cooperation - DG ENER.C.4

Electrifying Europe: Perspectives from the Industry and Grid Operators on Skilled Workforce as a Bottleneck



15/05/2025

The Draghi report: A competitiveness strategy for Europe (2024)

"The EU's green transition requires workers with appropriate skills to develop, manufacture and roll out green technologies. Moreover, society must develop awareness, practices and skills to function in a more sustainable and circular fashion."



EU energy policy context

The Grid Action Plan (2023)

Strengthening the supply chains as one of 7 areas covered.

The Competitiveness Compass (2025)

The foundation of Europe's competitiveness is its people.

Clean Industrial Deal & Affordable Energy Action Plan (2025)

Clean Industrial Deal therefore commits to a just transition that delivers quality jobs and empowers people, building on their skills, while promoting social cohesion and equity across all regions.



Europe needs a radical step change in ambition and action – for all skill levels and for all types of training and education. This is as important for people's careers and prospects as it is for our competitiveness.

To do so, we will establish a Union of Skills – focusing on investment, adult and lifelong learning, skill retention and the recognition of different types of training to enable people to work across our Union.

Political Guidelines for the next European Commission 2024 - 2029 You will be responsible for developing and building up a Union of Skills. You should design an overarching strategy, focusing on investment, adult and lifelong learning, vocational education and training, skill retention and recognition and enhancing skills intelligence. You will ensure this is a collective and inclusive project, including all stakeholders across government, education and business.

You will work on the European Education Area to drive a common approach to skills development, learning mobility, quality and inclusiveness. You will make the most of the tools at our disposal, including by strengthening Erasmus+.

Mission Letter to Roxana Mînzatu, Executive Vice-President for Social Rights and Skills, Quality Jobs and Preparedness



A Union of Skills to equip people for a competitive Europe





Why to act?

There are three three main reasons why Europe needs a step change in ambition and action:

- 1. Skill shortages and gaps Europe does not produce enough skilled workers in both quality and quantity.
- 2. Transformation speed gap Education and training systems and providers struggle to keep pace with labour market demands.
- 3. Fragmented governance and skills intelligence barriers to execution and coordination hinder progress, highlighting the need for more agile governance.





Build skills for quality lives and jobs **Upskill and reskill** for the digital & green transition Circulate skills across the EU for competitiveness

Attract, develop and retain talent for Europe's future



Q

Building a solid foundation through education and training

- Boost basic skills from early years to adult learning.
 → Action Plan on Basic Skills
- Ensure all children and young people leave school with adequate basic skills.
 → Basic Skills Support Scheme pilot
- Foster excellence in STEM education and training.
 → STEM Education Strategic Plan
- Make Vocational Education and Training (VET) more attractive, innovative, and inclusive.
 → EU VET Strategy
- Tackle shortages, improve conditions, and boost careers for educators.
 - → Teachers and Trainers Agenda



Regular upskilling and reskilling as the new norm

- Upskill and reskill more workers in strategic sectors
 Reinforced Pact for Skills
- Provide skills for sectors undergoing transitions.
 i Review and strengthen EU Skills Academies
- Help workers involved in restructuring processes. →
 → Skills Guarantee pilot
- Train people for sectors with skills gaps.
 University-business partnerships

0

Free movement of knowledge and skilled people

- Simplify recognition of skills and qualifications across the EU.
 - → Skills Portability Initiative
- Improve the free movement of learners and workers.
 → European degree and European VET diploma
- Strengthen cooperation between universities. → European Universities alliances
- Enhance pupil and teacher' mobility across schools.
 → European School Alliances
- Make Erasmus+ more inclusive and accessible.



Making the EU a magnet for talent

- Facilitate targeted recruitment of non-EU skilled professionals to address critical shortages.
 → EU Talent Pool
- Attract top students and researchers from non-EU countries.
 → Visa Strategy
- Offer competitive work conditions to attract top talents to Europe.
 → Marie Skłodowska-Curie Actions Choose Europe pilot



For further information on skills in DG ENER, please reach out to: <u>Remi.Mayet@ec.europa.eu</u>

© European Union 2025

Unless otherwise noted the reuse of this presentation is authorised under the <u>CC BY 4.0</u> license. For any use or reproduction of elements that are not owned by the EU, permission may need to be sought directly from the respective right holders.



Slido

Participants can participate and ask questions via slido.com using the code #1127241 or scan the QR code below.





Best Practices from Grid Operators









The job needs of the French electrical grids sector due to Energy transition

And the project of the Grids Schools to develop the skills required

0000

RTE [TSO] & Enedis [DSO] May 15, 2025









A sector-wide strategy :





The energy transition is leading to massive investments in Electrical grids ...that require large human resources





The impact on jobs in the Electrical grids industrial sector

Massive recruitment needs in the Electrical grids industrial sector to succeed in the energy transition, i.e. around 7,000 recruitments on average per year



2 These recruitments are much stronger among Suppliers and service providers than among Electrical system operators (TSO & DSO)

Besoins de la filière 2030



22



The impact on the skills of the Electrical grids industrial sector







Our double challenge for a successful energy transition



Increase the number of trainees and attract a larger population: young people, women, people in retraining, etc.

2

Adapting training to the needs of the Electrical grids sector

Stakeholders in the Electrical grids industrial sector have mobilized through an unprecedented partnership, the "Grids Schools for the Energy Transition", initiated in 2023 by Enedis and RTE (the French TSO), and professional organizations. This project aims to enable the Electrical grids sector to attract talents to its professions and recruit both in quantity and quality to address the challenges of the energy transition.

It focuses on recruitment needs from "vocational qualifications" (high school) to master's degree level, including career transitions and reintegration,

It deals with the skills that form the core of the sector: electrotechnics, automation, industrial maintenance, telecommunications, grid design and grid operations.



Our 5 axis to meet this challenges at the national level



Focus on the 3rd axe : the partnership with the French Ministry of national education and the "Grids Schools for the Energy Transition"

Developing a tailored training offering based on integrating specialized content into curricula, referred to as "Electrical Grids focused Classes", across secondary education and professional higher education throughout the country.

- This approach involves partnerships with educational institutions and the adaptation of school programs, dedicating 30% of the content to industry-specific professions, 18 weeks of internships with partner companies, and initiatives to train teachers (such as immersive days in companies and e-learning modules on electrical grids)
- It also includes the establishment of specialized training programs for electrical grid technicians through the introduction of complementary qualifications.
- At the higher education level, the goal is to develop a hybrid training offering to impart more advanced skills aligned with the future challenges of electrical grids.



The distribution of classes dedicated to Electrical grids professions (end of 2024)

Aucun lycée Plus d'1 lycées 1 lycée Non concerné

103 "electrical grids" partnerships for training at the level of the « Vocational Baccalaureate in Electrical systems » (Vocational High school)



41 training institutions involved in the partnership at the Higher technical diploma



18 partnerships for "Electrical grid installers" specialization trainings





Conclusion : key success factors and way forward

KEY SUCCESS FACTORS:

- Cooperative work at the scale of the Electrical grids Sector
- Partnership with institutional stakeholders from the world of vocational education (e.g., the Ministry of National Education) and professional training (e.g., France Travail)
- High-level support from companies, professional federations, and political backing
- A dual approach: quantitative (e.g., increasing the recruitment pools) and qualitative (e.g., promoting gender diversity, modernizing pedagogical resources, etc.)
- Co-construction of training programs between educational stakeholders and companies in the Electrical grids sector
- Support for professional pathways, from introductory internships to employment.

WAY FORWARD:

- Structure and sustain the approach within the Electrical grids sector
- Continue to strengthen the number of partnerships with high schools and technical colleges in collaboration with the Ministry of National Education, with a localized approach
- Adapt the skills by developing hybrid degrees from Bac +3 (Bachelor's degree level) and Bac +5 (Master's degree level) and modernizing educational resources and technical platforms
- Deploy a continuous training program for job seekers and people in integration, targeting woman, young people and beneficiaries of the RSA (Income Support Allowance).



To download the full study,

Scan here



or click here

To find out more about the Grids Schools for the Energy Transition, Scan here

ÉNERGÉTIOUE



or click here

Écoles des Réseaux – Les métiers de la transition énergétique

https://www.info.gouv.fr/upload/media/content/000 1/13/8bed4622f61599eb95fd74da3f2b43a5ef604de 9.pdf

The energy transition is waiting for you!

The Electrical grids sector offers jobs of the future that are accessible to all

A class from the Grids Schools for the Energy Transition





A technical platform created with professionals and students in a Grids Schools for the Energy Transition



Lycée Jean Monnet – Foulayronnes (nov. 2024)

The Grids Schools for the Energy Transition contribute to the feminization of technical professions in industry





Initiatives to promote the attractiveness of Electrical grids sector jobs





Intervention in a school from middle school to promote energy transition professions and Electrical grids sector

The 5 axes of the program with initiatives carried out by the sector's companies and partners

Attractiveness	Educational resources and Technical platforms	"Electrical Grids" Classes from vocational high school to Higher technical diplomas (BAC PRO – BTS)	Specialized higher education from Bachelor's degree to Master ("Bac+3 – Bac+5")	Continuing vocational training
Organize acquisition campaigns inspired by digital marketing	Create an educational resource center	Strengthen "Electrical grids" partnerships for training at the level of the « Vocational Baccalaureate in Electrical systems » (Vocational High school)	Develop a range of higher education courses adapted to the expectations of industries (e.g. hybrid master's courses with a dual specialization in civil engineering / electrical engineering)	Publicize the training programs dedicated to our core businesses
Strengthen communication and promotion actions	Produce a catalogue of educational resources for the training programs leading to Electrical grids professions	Develop "Electrical grids" partnerships among the Higher technical diplomas and prospect non- electrotechnical diploma to diversify recruitment	Deploy some "electrical grids" partnerships for Bachelor's degree training	Supporting guidance projects to enter the electrical grids sector for people in retraining
Implement specific actions for the feminization of professions	Invest in technical platforms for electrical systems training programs	Develop the offer of specialized professional training (« Bac +1 ») to train "electrical grid installers"	Partner with universities with master's degrees in "Electronics, Electrical Energy, Automation"	Develop the "Electrical grid installers" Vocational training offer by relying on existing educational infrastructures
Create an orientation MOOC	Training teachers and trainers involved in our core professions training programs	Invest in the infrastructures needed to provide training (e.g. electrical mobility, technical platforms for electrical grid installers, etc.)	Developing educational resources adapted to higher education and promoting research work	Developing a digital Vocational training offer
		Developing alternating (work-study) training programs to better meet the expectations of industries		

CREAGE HOU

PRACTICAL EXAMPLES FROM AMPRION TO ENSURE SKILLED WORKFORCE

15.05.2025

Slido #1127/241










SOCIAL RECRUITING CAMPAIGN



SOCIAL RECRUITING CAMPAIGN

PUBLISHED ON: INSTAGRAM, FACEBOOK & LINKEDIN





PARTICIPATION AT TRADE FAIRS



E-WORLD ENERGY & WATER EUROPE'S LARGEST ENERGY TRADE FAIR



- First participation at Europe's largest energy trade fair from 11.-13.02.2025 (business staff and recruiting team)
- 110 square meters and modern
 equipped exhibition stand
- More than 40 colleagues from ten departments, including talent management and purchasing gave presentations and communicated with business partners and potential applicants







Amprion | Girls` Day

GIRLS` DAY EVENT ON THE 03.05.2025

- Amprion welcomed 14 girls between the age of 11 to 16 years at our office in Cologne
- Insights into the work of a transmission system operator, various career paths, the front office and main switch gear
- Practical Exercises
- Measure for a stereotype-free professional orientation of young girls









INHOUSE RECRUITING EVENT "WOMEN IN ENERGY" IN 2024



INHOUSE RECRUITING EVENT "WOMEN IN ENERGY" IMPRESSIONS







MANY THANKS FOR YOUR ATTENTION!

Are you looking for a responsible job and want to help us shape the energy transition? Scan and apply now! Participants can participate and ask questions via slido.com using the code #1127241 or scan the QR code below.











Slido

Best Practices from the Industry













The NKI approach to talent attraction

Evripidis Karatsivos Director, Products Engineering - NKT Co-Chair, Transmission Technical WG - Europacable

The NKT approach to talent attraction | 15.05.2025 | 50

Working for NKT is not just a job, but it is ...



A Compelling Story



Systematic Career Development



NKT brings structure in Ambition and Potential



People in focus



Broad reach, tailored messaging, holistic offering

Building Networks	 Strong employer branding to increase visibility in the scarcest target audiences
	 Extensive sourcing and networking with candidates in universities, job fairs, conferences, etc
	 Targeted candidate searches and marketing through social media
Flexible Recruitment Philosophy	 Engaged hiring managers to champion NKT values and extend professional networks Ensure work-life balance by offering flexible work solutions including flexible location, remote working, relocation Relaxed requirements on the local language, English as work language Actively sourcing workforce from across borders based on competence
Investing in People	 Hire junior colleagues and invest heavily in training Offer "on-the-job" training and defined career paths career development – Hire to retire approach Extensive trainee program in multiple locations and competences

The question remains...

...how do we make careers in the cable industry more attractive?

- Attractive university programs
- Attractive vocational training programs
- Enhanced collaboration with the industry
- Enhanced talent mobility within the EU borders
- Enhanced transferability of skills from other industries

What is the role of the industry? What is the role of policy?





NKT HV CABLES AB

Rombvägen 4, 371 65 Lyckeby, Sweden

T: +46 70 285 30 78 Evripidis.karatsivos@nkt.com

NKT[™] is a trademark of NKT Group. ©2017 All rights reserved. V1.1.

FROM RECRUITMENT TO GROWTH: BEST PRACTICES IN TALENT DEVELOPMENT

PRYSMIAN Member of Europacable

prysmian



Enhancement of Talent Attraction & Employer Branding

- Presence in Universities and Schools
- Adoption of recruitment agencies & Internal COE
- Targeted recruiting Programs for DW and NDW

Focus on Global Mobility and Internal Job Opportunities



- Global Mobility Policy
- Internal Job Posting Platform

Talent Attraction & Development Strategy

Collaboration with Educational Institutions

• Joint programs with Universities

Investment in Training & Development

- Corporate Academy & reinforcement of Technical School
- Technical Career Path for Engineers (DW)
- Structured OTJ Training (for NDW) and Certification Programs (for Jointers)

Monitoring of Employee engagement, focus on Well-being and D&I

• Annual Survey and Action Plan

Long-Term Workforce Planning



Technical Career Path for Engineers

WHY AND WHAT

It allows the **recognition of technical seniority**, facilitates the **development of technical knowhow** and boost **motivation and retention**

#1 Definition of Profile of Expertise and Skills Mapping

#2 Assessment form for each profile with customized skills and relative weight#3 4 seniority levels defined by a threshold value



Ы.





EVOLUTION & RESULTS

Introduced in **2017** on **23** employees Run every year and extended on **more than 200 highly skilled** employees in 2025

From 2019 to 2025

+60% knowledge based on mapped parameters/skills

+20% people with recognized seniority
+9% in the higher level of seniority
(Principal & Discipline Leader)



2025 HVDC Submarine

Seniority growth on single skills for area of expertise e.g. HVDC Submarine

SENIOR

Hiring & Training Program for Jointers (NDW)

HIRING

TRAINING & CERTIFICATION

- In 2024 we structured a New Recruitment Model (supported by Randstad Italia) to respond in a more efficient way:
 - Group Assessment
 - HR and Line Managers interview
- Prysmian@school: Employer Branding activities dedicated to students from Technical and Professional Institutes in Milan and its surroundings to create a pool of future Jointers, raise awareness (Brand Reputation) and respond to a community need.



Jointers Growth: 2020-2025





- **Training is a continuous process**, and it takes 2 to 3 years to acquire the necessary skills.
- From the very first day, Jointers attend courses related to **HSE and offshore safety matters** in specialized institutions in Pavia, Lecco, and Bologna.
- Prysmian created a **'Training** School' in Alessandria (and a new training HUB in Pozzuoli) in order to prepare people on the main topics related to joint's activities (cable voltage, welding and brazing)









Thank You

Prysmian

Participants can participate and ask questions via slido.com using the code #1127241 or scan the QR code below.











Slido

EU Webinar on Skills

How to Attract Female Talents

Marina Durrer

Confidential

©Hitachi Energy Ltd 2025. All rights reserved

Welcome

"Promoting gender diversity is more than just an ethical choice — it's a strategic tool to address the shortage of skilled workers . By tapping into the full talent pool, including women and diverse gender groups, organizations can unlock innovative perspectives, foster collaboration, and bridge critical skill gaps in the workforce. Diversity isn't just inclusion — it's the future of sustainable success."



Marina Durrer Semiconductor Sales Manager Hitachi Energy Switzerland

HITACHI

EU Webinar on Skills How to Attract Female Talents in the Energy Sector

Empowering Passions: Advancing Personal and Social Impact Beyond the Workplace



Inspire employees to organize initiatives



Companies to contribute working hours

Showcase engagements in goalsetting



HITACHI

EU Webinar on Skills How to Attract Female Talents in the Energy Sector



Honest Conversations: Challenges Ahead and Learning Along the Way



ঞ

Many hidden challenges still exist

Mistakes are part of being human

Unconscious bias is natural



HITACHI

EU Webinar on Skills

How to Attract Female Talents in the Energy Sector



Allow Flexibility



Home office written agreements

Corporate Branding: Defining Organizational Identity and Cultivating Behavioral Excellence



Inclusive language and pictures

Mandatory training sessions on behavioral skills

EU Webinar on Skills

How to Attract Female Talents in the Energy Sector

Empowering Passions: Advancing Personal and Social Impact Beyond the Workplace



inspire employees to organize initiatives

Encourage career profile promotion

Companies to contribute working hours

Showcase engagements in goalsetting

Many hidden challenges still exist Mistakes are part of being human (i)

Unconscious bias is natural

Honest Conversations: Challenges Ahead and

Learning Along the Way

骨

Allow Flexibility

Home office written agreements

Corporate Branding: Defining Organizational Identity and Cultivating Behavioral Excellence



Inclusive language and pictures

Mandatory training sessions on behavioral skills

"Inspiring the next generation"

HITACH

Siemens Power Academy

SiEmergy[™] - Emergency Response Master Energy Transition Challenges

Best Practice from Industry, 15 May 2025



www.siemens.com/poweracademy



Urestricted | © Siemens Power Academy, be enriched!



more grid balancing interventions since 2015



of electrical faults caused by human being



90%

of unplanned events require multi-system coordination





100

38 B P

Empower Your Team To Manage The Unexpected Powered by simulation. Driven by insights. Built for progress.









Code Compliant

Standard processes and procedures

Response and Recovery

Guiding rational, behavior-aware engagement throughout incidents response and recovery

Stress Management

Applying calm, people-centered behavior and communication in high-pressure situations

Build, Reflect, Advance

Develop special skills, learn from action and move forward stronger





SiEmergy[™] - Transform Risk To Opportunity Tackle real-world scenarios and build critical skills



SIEMENS
Meet the challenges of the energy transition with SiEmergyTM

www.siemens.com/poweracademy



Urestricted | © Siemens Power Academy, be enriched!

Questions & Answers

Participants can ask questions via slido.com using the code #1127241 or scan the QR code below.











Conclusions









Conclusions and Next Steps



EU GRID ACTION PLAN ACTION 13 ROADMAP TOWARDS FUTURE-PROOF GRIDS

1. Introduction

The European Commission published the Grid Action Plan on 28 November 2023 and asked, under its Action 13, that ENTSO-E and DSO Entity to collaborate with technology providers to develop common technology specifications and improve visibility of grid project pipelines, to facilitate investments in manufacturing capacity and secure supply chain.

With the Grid Action Plan, the Commission sets the frame to coordinate all European forces required for the development and deployment of Europe's power grids as the key enabling infrastructure for the energy transition. The grid technology providers and grid operators are fully committed to seeing this opportunity, by building on Europe's unique leading technological position in power system technologies.

This roadmap summarises the progress made and presents the next steps.

2. Our joint progress

The collaboration between four entities towards a more resilient, future-proof European grid has truly been a shared one — marked by deep collaboration, aligned ambition, and tangible milestones.

The Grid Action Plan, published <u>on 28 November 2023 (COM(2023) 757 final)</u>, triggered immediately a structured dialogue between European grid operators and technology providers. It sets out a clear list of urgent measures to accelerate grid deployment and address supply chain challenges. This built on earlier discussions at the <u>High-Level Forum on the Future of Grids</u> (September 2023), where we jointly recognised the need for reinforced collaboration between industry and operators to secure manufacturing capacity and enhance supply chain resilience.

Our partnership continued to gain strength with the <u>ENTSOL</u> <u>Econditable held in March 2024</u>, where we reviewed early progress and collectively underlined the importance of harmonised practices and long-term visibility to enable industry investment. At the 10th Energy Infrastructure Forum in June 2024, ENTSOLE, Europacable, and T&D Europe issued <u>aloint statement</u> supporting the implementation of Action 13, calling for streamlined planning, digital solutions, and stronger European manufacturing.

We built further momentum with a joint workshop on 3 September 2024, alongside CEV/CENELEC and the European Commission, tacking standardisation challenges under the Grid Action Plan. This marked a key turning point in our ability to shape a coherent, coordinated path forward. It fostered meaningful, practical discussions, sparked new ideas, and reaffirmed the commitment of key stakeholders.

Another major milestone came on 24 October 2024, when, for the first time, experts across our organisations convened to align on a unified set of commitments. The efforts were reflected by the signing of a Joint Commitment for Resilient European Manufacturing in December 2024, laying the groundwork for cooperation on common qualifications, testing, procurement, and silled workforce.

Our collaboration has also contributed to shaping inputs for broader regulatory frameworks, including revisions to public procurement directives. These efforts converged at the Second Joint Experts Meeting on 13 March 2025, where we fine-tuned our priorities and solidified our collective approach.

As we now look ahead, the upcoming roadmap is not merely the next chapter — it is the continuation of our shared commitment. It captures the spirit of partnership that has driven our achievements to

Joint Roadmap Towards Future Proof Grids June 2025



- We will continue to raise this topic in relevant platforms
- We will carefully review your contributions

STAY TUNED!







