

ÉCOLES DES RÉSEAUX

× Enedis

SUCCESS CASE 1.2025

The Grid Schools for the Energy Transition (*Les Écoles des réseaux pour la transition énergétique*)



THE CHALLENGE

To carry out the massive investments in electrical networks related to the energy transition (connecting renewable energies, electric mobility, network resilience, etc.), companies in the sector face **significant recruitment and skill needs**.

Today, the French electricity grid sector comprises approximately 1,600 companies and 100,000 employees. Projections indicate that between 2024 and 2030, nearly 10,000 recruitments per year will be necessary in France, including 7,000 for the 15 "core" professions dedicated to the construction and operation of the electrical network. These mainly involve execution and supervisory roles such as Electrical Network Installer, Electrical Maintenance Technician, Operations Technician, or Site Supervisor. These professions are practiced in companies of all sizes across the entire national territory and offer opportunities for career development.

This growth represents nearly **+43,000 recruitments by 2030** (taking into account workforce departures) in the core professions of the electrical grid sector alone.

Faced with this need, vocational and professional training programs, which are often too generalist, poorly adapted, and insufficiently attractive, may fail to meet the demand for skills and jobs. In addition to this challenge, the electrical grid sector must contend with strong competition within the industry for these technical profiles.

In this context, the "Grid Schools for the Energy Transition" project aims to address three challenges:

- Expanding training pools to meet recruitment needs, with objectives not only in terms of volume but also in terms of quality, such as increasing female representation, facilitating career transitions, and promoting social inclusion.
- Adapting training programs (both initial education in schools and professional training) to better align with the needs of the sector and the available training systems.



 Contributing to the structuring of the French electrical grid industrial sector around training and recruitment issues to secure the sector's investment programs and support the decarbonisation of the French economy.

THE SOLUTION

Stakeholders in the electrical networks sector have mobilised through an **unprecedented partnership**, the "Grid Schools for the Energy Transition", initiated in 2023 by Enedis, RTE (French TSO), and professional organizations.

This project aims to enable the electrical grid sector to attract talent 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 to master's degree level, including career transitions and reintegration, for the skills that form the core of the sector: electrotechnics, automation, industrial maintenance, telecommunications, and network administration, among others.

This program includes several key components:

1. Enhancing the appeal of training programs to expand talent pools, with a particular focus on promoting gender diversity:

This involves raising awareness in schools through proximity-based actions (e.g., deploying a toolkit for middle school students, teachers, and career advisors; immersive or digital serious games to explore professions; digital communication; discovery internships prior to career orientation).

2. Developing educational resources tailored to new skills:

For example, creating a pedagogical resource center to design educational content specific to electrical grids professions, covering qualifications from secondary school to postgraduate levels, as well as to develop training programs for instructors (teachers and professional training educators); offering digitilised training programs or innovative training solutions using virtual and augmented reality to safely teach job-related practices (electricity hazard management); modernising and expanding technical platforms, particularly for «Electrical Grid-Focused Classes».

3. Developing a tailored training offering based on integrating specialised content into curricula, referred to as "Electrical Grid-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 specialised training programs for network 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.
- 4. Rolling out a training pathway for job seekers and individuals in reintegration programs, targeting priority groups (e.g., recipients of RSA (a French welfare benefit for low-income individuals), young people, women)

This involves developing more targeted training offerings (e.g., a certification program on the installation of charging infrastructure for electric vehicles or for urban network technicians) and raising awareness of the sector's professions and support mechanisms among career advisors and the targeted audiences. This initiative is carried out in collaboration with the public employment policy operator "France Travail."

MAIN ACHIEVEMENTS

- A strong momentum since the initiative's launch in March 2023: from 45 high schools offering "electrical grid-focused classes" to 111 high schools with Vocational Diploma in Electrical Systems and Connected Environments (bac pro MELEC), representing 8,000 students in training, and 41 BTS programs in electrotechnics.
- One year after the launch of the initiative, at the end of the final year of high school, the retention rate in the Electrical Grid Schools pathway was 74%.
- Positive feedback from schools and students, with increased teacher motivation and a reduction in school dropout rates.
- Launch of pilot programs to promote the inclusion of women in technical professions with 100% female cohorts.
- A contribution to the structuring of the electrical grid industrial sector.

KEY SUCCESS FACTORS

- Cooperative work at the scale of the Electrical Grid 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).



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- 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, modernising pedagogical resources, etc.).
- Co-construction of training programs between educational stakeholders and companies in the electrical grid sector.
- Support for professional pathways, from introductory internships to employment.

WAY FORWARD

- Structure and sustain the approach within the electrical grid sector.
- Continue to strengthen the number of partnerships with high schools and technical colleges in collaboration with the Ministry of National Education, with a localised approach.
- Adapt the skills by developing hybrid degrees from Bac +3 (Bachelor's degree level) and Bac +5 (Master's degree level) and modernising 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).

