



Action! Learning through Establishing Solar Panels

Across several ECF4CLIM demonstration sites, solar panels have been installed – not just as technical upgrades, but as learning opportunities. These structural interventions required collaboration both within schools and universities, and also with municipalities. While the processes were often slowed by bureaucracy, the results have been impressive: significant energy savings, reduced emissions, and increased awareness of sustainability.

Students and staff alike gained technical literacy, learning how solar panels function and how to interpret energy consumption data. At the university level, engineering students noted that understanding the real-world impact of technology helped them design with sustainability in mind. The interest in solar energy extended beyond the classroom to

families and communities. Students moved from curiosity to advocacy, especially when they understood how a solar panel works. But knowledge alone was not enough. Real change happened when students had an active role. In some schools, students took the lead in planning solar panel installations. Supported by peer dialogue and consensus-building, they created tangible environmental benefits and a stronger sense of ownership. Through hands-on experience with solar energy, energy monitoring systems, and resource tracking, students developed not only technical skills but also systems thinking – reflecting on the social and ecological implications of technological decisions.

Learning from experiences: despite the benefits, there are practical and strategic challenges that need to be considered when planning this kind of intervention.

Technical fears or resistance to unfamiliar technologies: a number of students and the majority of staff expressed initial hesitation toward interacting with systems such as solar PV installations or water sensors due to lack of confidence, limited prior exposure, or concerns about handling complex systems.

Resource limitations: all schools faced limitations in funding and technical capacity. For less-resourced schools, even small improvements might be difficult to sustain or replicate without targeted investment.

Maintenance and technical support: once installed, systems require ongoing maintenance, which can be a burden if schools lack dedicated personnel or training. Ensuring that equipment remains functional and educationally useful is a long-term challenge.

Integration into daily practice: while the interventions were successful, their long-term effectiveness depends on whether they are integrated into teaching and school operations. If treated as one-off projects, the impact may fade over time. Sustainability must be embedded into routines, curricula, and institutional planning to ensure enduring benefits.

Scalability: teachers and administrators in the schools noted the importance of scaling such interventions to reach all students and involve more stakeholders. This requires time, leadership support, and cross-sector collaboration.