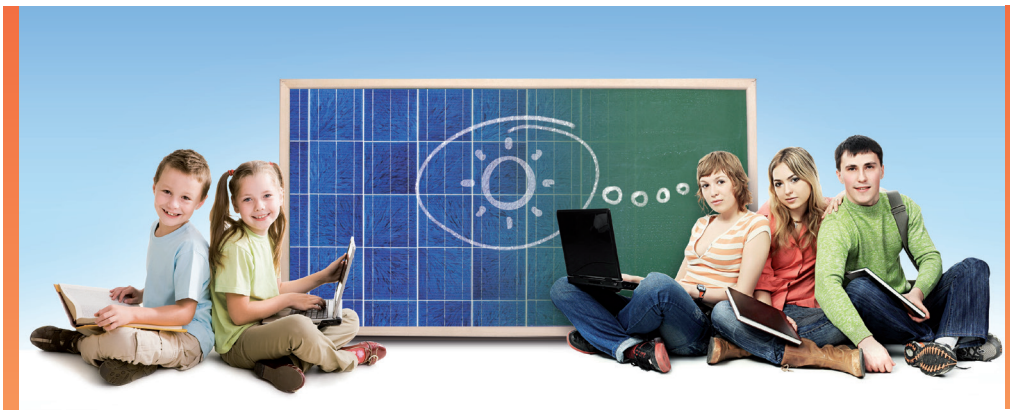
PV goes to school

For more than 55,000 Upper Austrian children in 362 primary and secondary schools and 188 nursery schools, solar energy and energy efficiency have become part of daily life. The innovative and comprehensive programme "PV goes to school", developed and run by the regional energy agency OÖ Energiesparverband (ESV), offered a 75 % subsidy for the installation of a 3-kWp PV system, a toolbox of novel educational material on renewable energy, and a 1-day training for teachers on how to integrate these topics in their curriculum. 40 % of all Upper Austrian primary and secondary schools (children aged between 6 and 15) and 25 % of all nursery schools participated in the programme. Overall, 2 MW PV were installed.

This programme is embedded in a wider policy framework including regulatory measures "sticks", financial incentives "carrots" and information and training activities "tambourines", which has shown to be very successful in Upper Austria.



The programme at a glance

- Programme name: PV goes to school
- Main objectives: Increase environmental awareness of children, teachers, parents and more; energy savings and reduced energy costs in municipalities
- Main elements:
  - 3-kW$_p$ PV system (75 % subsidised)
  - educational material
  - training for teachers
  - guidance on energy savings
- Source of the funding: Regional government
- Total budget: 3 million Euro
- Managed by: OÖ Energiesparverband, the regional energy agency

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Reaching out through the younger generation

The programme was created with multiple goals in mind:

- motivate children, teachers and parents for solar energy and spark their interest in the energy transition in general
- help municipalities save electricity and reduce their energy costs
- develop and provide age-appropriate educational material on energy savings and renewables
- achieve lasting impact by training teachers and encouraging the integration of these topics in the curriculum

Most schools in Upper Austria are municipality-owned and relatively small. Although the PV system was subsidised, the municipalities and schools needed to cover 25 % of the costs. A variety of fund-raising approaches were taken (i.e. holding events, food-sales, selling symbolic "solar building blocks", inviting local companies as sponsors, asking for support from the town council). In this manner, participation in the programme became a community project.

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A comprehensive package

After installation, rooftop PVs are often "invisible" and easily forgotten by those using the building.
The programme aimed to avoid this "out of sight, out of mind" phenomenon and ensure long-term impact within the community.

The programme included:
- 75 % subsidy for a 3-kWp PV system
- novel age-appropriate and ready-to-use educational material on renewable energy
- a display panel showing the solar yield which had to be installed in a prominent location
- a customised 1-day training for teachers (mandatory for one educator per school)
- guidance on how to save electricity in schools
- a programme website, also for peer-to-peer inspiration

Within the programme, primary and secondary schools were required to carry out a school project.
This got the children involved and led to higher visibility of the programme beyond the school's walls. A few examples include: students acting as "energy detectives" in the school and at home; organisation of an "open house - sun day" to inaugurate the PV system; construction of miniature solar panels, wind-mills and solar-powered vehicles; building a solar-oven and preparing food for other classes; students writing and presenting a yearly report on the solar yields; arts and crafts activities on the topic of solar/renewable energy. Finally, all schools are required to monitor their monthly solar energy production and report it on the programme website for at least 3 years.

Best in class

This unique programme stands out in its:
- Scope: More than 55,000 children and their communities were reached! The online database with hundreds of PV installations delivers valuable data on the operation of PV plants in practice.
- Participatory approach: The school authorities (in most cases the municipality), the teachers and the students were actively involved in all stages of the project, including financing and data monitoring.
- Educational strategy: The ESV developed new interactive pedagogical tools focussing on "learning-by-doing", such as "solar test boxes" for different age groups and ready-to-use training sessions for teachers. The greatest novelty was the creation of tools for nursery school children. The teachers were trained on how to use these and integrate them into their curriculum.
- Long-lasting effect: Training at least one teacher per school (in total, over 600 educators) allows the knowledge to be carried over from year to year. The strong involvement of the students offered them valuable knowledge for their personal and future professional lives. The school project and fund-raising activities got the entire community engaged, thus also increasing the environmental awareness of the larger public.

Fully replicable: schools and sun are everywhere

The idea of the programme can easily be transferred to other countries and school systems. A number of elements, such as the educational material, training for educators and school projects, can be used even if public subsidies for the PV systems are not available.

What was achieved?

- 550 schools participated, over 40 % of all primary and secondary schools and 25 % of all nursery schools in the region
- 600 teachers trained in 29 training courses
- novel educational materials
- 2 MW PV installed

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