



COURSE DESCRIPTION

Green Energy, Clean Future: Renewable Energy and Sustainable Practices in Education

The EU's 42.5%-by-2030 renewable target, turned into a solar panel, a wind-turbine simulation and a compost bin participants build themselves.

DURATION 5 days · 25 hours	LANGUAGE English (B1+)	GROUP SIZE Max 20 participants
DAILY SCHEDULE 09:30-15:00 Monday to Friday, with a break for lunch	AUDIENCE All school levels No specific prerequisites — open to all teachers and school staff.	CERTIFICATE Attendance + Europass Mobility
COURSE CENTRES Antalya · İstanbul · İzmir · Mersin · Budapest · Bremen · Rome Dates and cities of the scheduled sessions are listed on the course page.		

01 Overview

This week turns the EU's renewable-energy target into things you build with your own hands and can rebuild with a class, so students learn not only how renewable energy works but why it matters.

- **Monday** — you contrast renewable and fossil fuels through a game and start developing renewable-energy project ideas for a school.
- **Tuesday** — you build a mini solar panel and run an online wind-turbine design simulation.
- **Wednesday** — you build a compost bin to see how organic waste breaks down in air, learn why the same waste sealed away from air produces biogas instead, then design a bioenergy project for school.
- **Thursday** — you explore emerging energy technologies and turn one of the week's builds into a lesson for your own class, with a visit to a local school's working installation where one is available and in session.
- **Friday** — you weigh energy-efficiency strategies against what the week's builds could realistically offset, and present your own renewable-energy project to a panel of peers and the trainer.

You go home with three hands-on projects ready to rebuild with a class — the compost bin, the mini solar panel and the wind-turbine simulation — and a renewable-energy project for your school already presented to colleagues. All the components for the builds are provided at the centre, so there is nothing to source or bring in advance.

02 Course description

Most students can already explain what a wind turbine does. Almost none of them could explain why the EU needed a directive to get more of them built — and that gap, between knowing the technology and understanding the policy behind it, is exactly where this course starts.

Under the Renewable Energy Directive (RED III), the EU has committed to sourcing at least 42.5% of its energy from renewables by 2030 — a collective, bloc-wide target, not a fixed quota imposed on each member state individually. Rather than leaving that number as a headline, the course hands it to participants as something to build, not just cite.

Participants construct a working mini solar panel, run an online wind-turbine design simulation, and build a compost bin to see how organic waste breaks down — the starting point for how bioenergy is made — three hands-on projects designed to travel straight back into a classroom. Where a local school with a working installation is in session, a visit shows renewable-energy projects operating in practice, and the week closes with each participant presenting their own renewable-energy project, in brief, to a panel of peers and the trainer.

The projects travel home ready to rebuild with a class, and so does the answer to the question a solar panel alone can't give a student: not just how renewable energy works, but how one school's efforts add up toward the EU's wider 42.5% target.

The composting here is built as a hands-on project, alongside the solar and wind work — the point is what students construct and understand. If the question is food waste itself, how much of it a school actually produces and how that is measured and reduced before anything is composted, that is the subject of *Zero Waste Schools: From Prevention to the Bin*.

The three projects scale by age: primary classes usually manage the compost bin and a guided version of the solar-panel build, while the wind-turbine simulation and the full solar-panel build suit upper-primary and secondary groups.

For a school's carbon, ecological and water footprints, see *Environmental Sustainability And Education*.

03 Learning outcomes

- 01 Identify renewable energy sources (solar, wind, biomass, hydropower) and explain their environmental impact.
- 02 Rebuild the solar panel, the wind-turbine simulation and the compost bin with a class, and turn one of them into a ready-to-teach lesson.
- 03 Explain how solar panels and wind turbines work, through practical demonstrations.
- 04 Weigh energy-efficiency measures and renewable projects for your school against the EU's 42.5% target: what they could realistically cover, and what it would take.

04 Methodology

Balanced Theory and Practice

A learner-centred mix of theoretical knowledge and hands-on activities, so you not only understand renewable energy but can teach it.

Hands-On Building

Real hands-on projects — building a mini solar panel, simulating wind turbine design, and constructing a compost bin as the starting point for bioenergy.

School-Ready Projects

Group activities turn ideas into concrete renewable-energy projects you can implement at your own school.

Day 1

Fundamentals of Renewable Energy and Global Energy Issues

- **Icebreaker:** "Energy Cycle Game" — an interactive game contrasting renewable and fossil fuels
 - Introduction to renewable energy sources and the global energy crisis — the EU's Renewable Energy Directive (RED III) 42.5%-by-2030 target
 - Solar, wind, hydropower and biomass energy — opportunities for schools
 - **Group activity:** developing ideas for renewable energy projects in schools
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Day 2

Solar and Wind Energy

- **Warm-up:** two systems, eight parts — in small groups, participants sort eight mixed-up terms, such as blade, inverter, generator and solar cell, into a solar-energy system and a wind-energy system, then say in one sentence how the parts of each work together
 - How solar energy systems work, and how to teach them
 - Wind energy and turbine design, and school applications
 - **Hands-on:** building a mini solar panel
 - **Hands-on:** wind turbine design simulation using an online tool such as KidWind's or WhiteBox Learning's
 - **Group activity:** planning renewable energy projects for schools
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Day 3

Renewable Energy Applications in Schools and Bioenergy

- Implementing renewable energy projects in schools and lessons
 - **Bioenergy:** turning organic waste into energy, and how to teach it
 - **Hands-on:** building a compost bin — how organic waste breaks down in air, and why the same waste sealed away from air (anaerobic digestion) is what produces biogas
 - **Group activity:** designing bioenergy projects for schools
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Day 4

Future Energy Technologies and Innovative Teaching Methods

- Future trends and innovations in renewable energy technologies
- **Hands-on:** turning one of your three builds into a single lesson for your own class — the age group, the question it answers and what the students record — then trying it out on a partner
- **School visit:** observing renewable-energy projects in practice, where a local school with a working installation is available and in session — the exact site is confirmed shortly before the course rather than in advance; otherwise, the session works through a documented school installation instead

Day 5

Energy Efficiency and Course Conclusion

- Energy efficiency and conservation strategies for schools, sized against what the week's builds could realistically offset
- Sustaining renewable energy projects within the school system: what share of the school's own energy use they could realistically cover, and what it would take to get there — set against the EU's 42.5% target introduced on Day 1
- **Final project:** presenting your renewable energy project, in a short format, to a panel of fellow participants and the trainer
- Course evaluation and reflection on learning
- Certification ceremony

PLEASE NOTE

Sessions run from 09:30 to 15:00, Monday to Friday, with a break for lunch. Timings can shift a little to suit the venue and the group.

Course activities and content may vary depending on participants' needs and the trainer leading the session; any changes are at the trainer's discretion. If there is a specific topic you would like included, please let us know — content-related requests must reach us at least 3 weeks before the course start date so we can confirm them in time.

06 Materials

- Hands-on building activities (mini solar panel, compost bin) and an online wind-turbine design simulation, such as KidWind's or WhiteBox Learning's, used during the course. All components for the builds are provided at the centre — there is nothing to source or bring in advance.

07 How to prepare

- All the components for the builds — the solar panel kit, wind-turbine simulation and compost bin — are provided at the centre; there is nothing to source or bring in advance.
- A laptop or tablet is useful for the wind-turbine simulation, though centre computers are also available.

08 After the course

- Participants will receive their Certificate of Attendance and the co-signed Europass Mobility document.
- Participants will complete a general course evaluation and event survey.
- Participants will receive course materials, videos, photos, and PDF documents in both digital and print formats.
- Follow-up support: self-evaluation materials are provided. Depending on the group, an email group may be set up so that participants can keep exchanging ideas.

09 Why this is Erasmus+ eligible

The Erasmus+ Programme Guide names environment and climate action as a horizontal priority, stating that Erasmus+ is "a key instrument for building the knowledge, skills, and attitudes on climate change and supporting sustainable development within the European Union and beyond" (Erasmus+ Programme Guide 2026, Part A – Priorities of the Erasmus+ Programme, p. 9).

10 What the course fee covers

INCLUDED IN THE COURSE FEE

- 25 hours of training and course materials
- Certificate of Attendance + Europass support
- On-site local support throughout the week

ARRANGED SEPARATELY BY THE PARTICIPANT

- Travel to the host city — invitation letter on request
- Accommodation — we share recommended options
- Travel & health insurance

ISSUED BY

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COURSE PAGE

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ABOUT ERASMUS MOBILITY ACADEMY

Erasmus Mobility Academy (OID: E10304561) is an Erasmus+ training provider offering professional development courses for educators, school staff and youth workers across Europe. Our courses are designed for international mobility — open to participants travelling from a country other than the host country — and support schools in building lasting institutional capacity. We provide structured learning, logistical guidance and certification with Europass.