



# Erasmus+

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Report containing research and analysis of the collection of examples of pro-ecological behavior in the workplace in the following industries: catering, construction and electricity. USING WITHIN THE ERASMUS + PROJECT  
**„Eco-friendly worker 1.0”**

Elements of the report:

1. Pro-ecological behavior in the workplace – introduction, basic definitions on an example Poland, Lithuania and Latvia.
2. Pro-ecological behavior in vocational school curricula on an example school from Poland, Lithuania and Latvia.
3. Pro-ecological behavior in menu of catering, construction and electrical industrial on an example companies from Poland, Lithuania and Latvia.
4. Latest trends of catering, construction and electrical industrial and people expectations. Pro-ecological behavior in the workplace Trends 2022.

Report annexes:

1. Work documentation.
  2. Photo documentation.
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## Elements of Diagnosis

### **1. Pro-ecological behavior in the workplace – introduction, basic definitions on an example Poland, Lithuania and Latvia.**

When evaluating the concept of ecology in the workplace and in an educational institution, a work variant or scheme of the following definition can be created, which can be improved during the project. Design of theoretical research on the formation and development of ecological competence:

<b>ECOLOGICAL APPROACH TO ELECTRICAL ENGINEERING EDUCATION AND ENERGY</b>					
Ecological competence of electrical engineers and electricians					
Ecology of education	Energy sector	European Qualifications Framework	Education of electricians and electrical technicians	Education for sustainable development	Pieredze enerģētikas jomā
Principles of ecological approach in energy education and energy companies					
Sustainable development		Ecology		Ecology of human development	

Political and legal regulations in Latvia regarding the energy sector

The name of the document	Short description of the document
Vocational Education Law	The law regulates the procedure for the implementation of vocational education, as well as the granting of an appropriate professional qualification.



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European Qualifications Framework (EQF)	A single eight-level European reference framework to promote lifelong learning and the transnational mobility of citizens. By providing reference points for European qualifications, the EQF can better compare and understand educational qualifications from different European countries.
Electrotechnical profession standard and education programm	Attached (in latvian).
Latvia's Sustainable Development Strategy until 2030	In Latvia, as in several other Central and Eastern European (CEE) countries, the primary component of the human capital talent and ability base is school education, followed by parents' contribution to the education and upbringing of children at an early age. These components definitely need to be strengthened.
Guidelines for the Development of Education 2021-2027. year	Environmental, climate crisis and resource sustainability issues
Latvia's National Energy and Climate Plan 2021–2030. year	<p>At present, it is decided in the educational institutions themselves whether and to what extent measures will be taken to educate pupils or students about resource efficiency, sustainable living, and thus energy and climate issues. Harmonized resource efficiency and sustainability education measures have not been developed and implemented at the national level.</p> <p>There are also too few planned and specifically targeted educational activities on sustainable management, and many of the educational activities carried out are not producing the desired</p>

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	results. The effectiveness of the implementation of existing measures is not monitored or evaluated.
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## **2. Pro-ecological behavior in vocational school curricula on an example school from Poland, Lithuania and Latvia.**

Reins Dāvis Doveiks, 3rd year student: “I chose vocational education because I did not want to go into depth on biology, drama and other high school subjects, because I already concluded in elementary school that they did not interest me at all. Riga State Technical School is a place to learn what interests you after graduating from elementary school. You will study general secondary education subjects, but the biggest benefits are vocational education, practical training, the opportunity to start working and be competent in your field after graduation. I represented the school in the largest car industry competition for young people in Latvia "New Car Mechanic 2020" and won the 1st place. The competition lasted for 3 days, and this experience alone was worth choosing a vocational education. In the future, I plan to participate in other competitions, as well as develop my knowledge and skills in the specific direction of car repair. This is exactly what influenced my choice of practice place this year - I chose a car service, the primary field of activity of which is car repair.”

The school of vocational education promotes the development of students' ecological perception, ecological understanding and awareness.

The aim of the “Green Skills” module of the Energy Technician education program is to promote the learner's ability to perform their professional activities in accordance with the sustainable development of the environment, resource-saving and energy-efficient management, as well as to make environmentally friendly decisions in everyday life. The results to be achieved by the module focus more on the acquisition of general theoretical green skills than on their in-depth application in the field of energy. At the end of the acquisition of the module "Green Skills", the learner takes a test - creates a presentation, which includes proposals and conclusions about the sustainable use of resources in their daily lives.

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When researching and analyzing the educational program in the specialty of energy, the acquisition of the study content is planned in accordance with the learning outcomes: knowledge, skills, competencies.

More than half of the students in the vocational education school acquire the content of education in practice (practical work), training and production practice at the level of application of knowledge, awareness or activity. Thus, students acquire green skills in the work environment if the company is “green-minded”.

Improving the ecological education of students in the field of energy at the vocational school, the introduction of the subject “Ecological approach to energy” in educational programs is currently the most important and effective component for promoting the development of an ecologically responsible attitude. A model of teacher-student pedagogical interaction in an ecologically oriented learning process, promotion of ecologically responsible attitudes, use of resources at school, cooperation between vocational education schools, as well as a model of school-society interaction should be developed.

In order for the subject “Ecological approach to energy” to become a component of ecological education in school vocational education programs in the specialty of energy technician:

- select and test a strategy for the implementation of the subject "Green approach to energy",
  - promote energy research in the context of achieving the goal of ecological education,
  - to promote the improvement of vocational education programs by optimizing the aims and tasks of teaching and upbringing, as well as by improving the content of subject curricula;
  - promote the development of teaching materials in the subject "Ecological approach to energy",
  - integrate ecologically oriented learning content and appropriate learning methods,
  - Encourage the development of cooperation programs and involve partners - employers and out-of-school organizations in their implementation.
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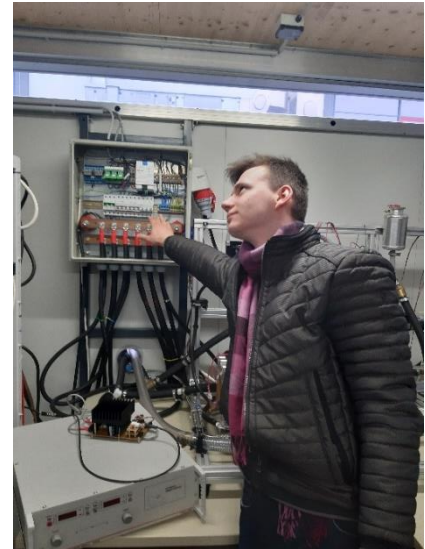


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## **Examples of foreign cooperation, practice programs for students in the field of electrical engineering have been implemented**

**2018** Erasmus + mobility project with two trainees in the Energy Department at the electrical installation company Electro Wagner GMBH.



**2019-2020** Due to the Covid pandemic, students in the Energy Department did not implement an internship mobility in an Erasmus + project.

**2022** In the Erasmus + mobility project, students from the Energy Department will go on an internship to the Czech Republic in September this year.



**2022** participation in Nordplus Youth Education Program project "Organization of green workplace at vocational school", Nr. NPJR-2021/10065. The aim of the project is to promote the introduction and use of green tools in vocational schools, so that the workplace for practical training is more environmentally friendly and sustainable.

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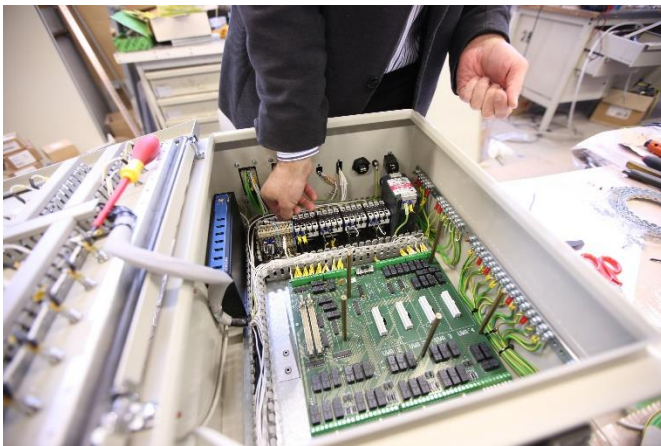


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### **3. Pro-ecological behavior in menu of catering, construction and Energetic industry on an example companies from Poland, Lithuania and Latvia.**

#### **Energy company JSC Energofirma "JAUDA"**



Since the establishment of the company, JSC Energofirma "JAUDA" has been producing products for energy and electrification

The main building of JSC Energofirma "JAUDA"

JSC Energofirma "JAUDA" is one of the largest manufacturers of electrical materials and equipment in the Baltics with more than 55 (no points required) years of experience in the industry. Since the establishment of the company (no commas are required), its profile has remained unchanged - "JAUDA" produces products for energy and electrification. AS Energofirma "JAUDA":

- understands customer needs and constantly adds value to customers' business;
  - takes care of the well-being and development of employees;
  - a socially valued, honest and socially responsible company that promotes the creation of innovations and continues to invest in the development of the company. JSC Energofirma "JAUDA" is involved in the implementation of work-based learning and:
  - provides trainees with personal protective equipment;
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- implements an individual approach to the acquisition of the study content for each student;
- offers students employment relationships after work-based learning;
- works closely with the educational institution during work-based learning;
- Educates young people about an ecological approach to work.

Dmitrijs Terepa, the head of the electrical equipment production plant of JSC Energofirma „JAUDA”, is satisfied with the long-term cooperation with PIKC “Riga State Technical School” and the theoretical knowledge and skills acquired by the students in the educational institution, which they can supplement in the work environment. The plant manager believes that cooperation with PIKC "Riga State Technical School" promotes the company's positive image of the employer in society and points to innovative thinking and work style, giving young people the opportunity to develop their career path in the company.

In their turn, the young people of PIKC “Riga State Technical School” emphasize that in practice JSC Energofirma “JAUDA” has gained a lot by working with the latest technologies, proved their professional skills and responsible attitude in the workplace, therefore after obtaining the qualification

As an example of ecological behavior, JSC Energofirma "JAUDA" produces products that allow to reduce electricity consumption. Instead of switches, the so-called dimmer switches that allow you to change the brightness of the light in the room, in addition, in the case of halogen lamps, incandescent lamps and energy-saving lamps, it allows to reduce electricity consumption, as well as creates a special mood in the room. When creating the wiring of a "smart home", customers more often install various automatic switches in the distribution cabinets, which, depending on the daylight, turn on and off the outdoor lighting, disconnect the power supply to the equipment that will not be needed at home during the absence of residents.

Enclosure and cabinet housings are made of cold-rolled galvanized steel sheets. The parts are cut and folded with CNC equipment, which ensures high precision and productivity. The housing parts are coated with a UV-resistant polymer coating by a powder technology method that complies with the corrosion resistance class C4 of the environmental classification (LVS EN ISO 12944-2: 2012).

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The products offered by JSC Energofirmas "JAUDA" are manufactured and marked with the CE mark in compliance with the regulatory requirements of the Republic of Latvia and European Union standards. The company is certified in accordance with 14001: 2005 environmental protection and management quality standards.

Ivars Eniņš, Commercial Director of JSC Energofirmas Jauda, emphasizes that the trend of energy saving in Latvia is becoming more pronounced, but the state still has great opportunities to develop this area. People are passive, reluctant to invest in solutions that save five years. If there was a push from the state, an incentive, support for energy-efficient solutions, programs, then people would be forced to think in this direction and ready to invest, he believes.

#### **4. Latest trends of catering, construction and energetic industry and people expectations. Pro-ecological behavior in the workplace Trends 2022.**

Energy experts believe that public understanding of the various electricity segments, including 'green thinking', is closely linked to vocational training institutions, leading to a better understanding of current and future market trends, finding the most appropriate solutions and seeing the true picture in the energy sector. With regard to change in the energy sector, we are talking about a revolution, because it will be a very rapid change that will have a major impact on the future development of the EU, the development of energy projects and the stability of the energy market.

"It is important to look to the future - it is clear that the importance of electricity will continue to grow, and it is safe to predict that the future is not possible without electricity. I am convinced that business thinking is changing, technology is changing and the business environment is changing. The world is increasingly aware of the need for clean air and a green environment. These will also be the key arguments for moving Europe and, hopefully, the world towards a climate-neutral economy over the next 10 to 30 years. To an economy that is unthinkable without renewable energy resources and without efficient technological solutions," says Guntars Baļčūns, CFO of Latvenergo.

The main challenges are:

- sustainable thinking of society;
- create special areas where it would be possible to develop solar and wind energy projects;



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- an obligation to install solar panels on the roofs of new buildings, to speed up the introduction of heat pumps, as well as to integrate geothermal and solar energy into modernized district heating systems.

7 most important principles of ecological behavior in the workplace:

Employee education for the implementation of ecological behavior

Availability of resources for the implementation of ecological behavior

Collection of information on ecological behavior

Assessment of ecological behavior

Designation of those responsible for ecological behavior

Take it step by step! Even with limited resources, at least one environmentally friendly step can be taken...

Achievable and measurable goals for ecological behavior have been set.

6 principles of an environmentally friendly employee:

Principle of reuse or recycling

The principle of waste

Principle of sustainability

Principle of cooperation

Family-friendly workplaces

Environmentally friendly measures

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