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BETTER BUILDING

Certifying VET teachers as Energy Saving Advisers

A transfer system into three different European societies

Implementation Concept - SLOVENIA

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The project partnership:

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- BEST Institut für berufsbezogene Weiterbildung und Personaltraining GmbH, Vienna, Austria (Coordinator)
- Fundatia Romano-Germana Timisoara, Timisoara, Romania
- GLOBAL Training and Consulting, Istanbul, Turkey
- PAPILOT - Zavod za vzpodbujanje in razvijanje kvalitete življenja, Ljubljana, Slovenia
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1) Preface

The threats of climate changes and the increment of energy prices are just two of the most recent aspects of the acknowledged need to reduce energy consumption and to apply ecologic aspects also in the construction of buildings. Without energy, a variety of things wouldn't be possible and no one would be able to manage his/her daily routine. Without energy, transportation and economy would come to a dead stop. Because of this, we all must be aware of how privileged we are to have energy, that unburdens our everyday life and keeps things moving. As it is not infinite, people need to understand the right way of consuming energy and other precious materials.

Unfortunately throughout Europe, there is no homogenous awareness of these requirements and therefore the ecological balance is rather poor in a large number of EU member states, among them Italy, Slovenia, and Turkey. This is especially true for building activities carried out by SMEs and the private building sector. Because of those facts, "Better Building – Certifying VET teachers as energy saving advisers. A transfer system into three different European societies" was brought into being. The project started in winter 2007 and will be finalised in the year 2011.

The partners of this European project, which is supported by a couple of strategic multipliers, come from 7 different countries and are committed to raising awareness and understanding of the ecological value of energy-saving construction, particularly through the improvement of vocational teaching contents in this field. This may lead one step closer to attaining the goals of the Kyoto protocol.

The main objectives of this transfer project are

- to raise the awareness of ecological issues among VET teachers for technical subjects, especially construction, and to supply learning contents and training materials that show how to use energy-saving materials and to reduce energy consumption in building construction
- to transfer, adapt and validate a modular curriculum for VET teachers and to qualify them as European Energy and Building Material Advisers in three European languages, i.e. in Italian, Turkish, and Slovenian

The main project outputs are

- a "Modular Curriculum with Teaching Materials" for acquiring additional competences in energy consulting, especially for the renovation of existing buildings and heating and insulation rehabilitation in Italian, Turkish and Slovenian.

- didactic "Guidelines" on how to introduce these materials into the framework of existing teaching schemes, with relation to the specific demand and need of individual users and to the specific learning cultures of the above mentioned countries and to the requirements of vocational training providers

- and this "Implementation Concept" which aims at raising the interest of educational policy makers and the respective organisations vis à vis the project topics.

Key objective of the implementation concept

The **implementation** is assisted by a **National Strategic Advisory Committee** in each target country, consisting of major stakeholders in the field of education and labour market policy as well as social partners.

The key objective of this document is to further create an implementation concept for each target country which describes how to put these collected materials into the mainstream learning practice, i.e. how to raise the interest of educational policy makers as well as the building industry and their training organisations.

The Implementation Concept provides a structured action plan for the localisation and organisation of putting the project results into practice in the deployment phase after the LLP funding. It offers organisational models, suggests training delivery structures and provides a basis for assessing the potentials of introducing the Better Building ideas in various sectors.

PART I

Introduction

2) Current situation and problems

The global situation in relation to energy seems to be changing dramatically in a very negative way. As over billions of people still do not have direct access to electricity, the consumption of electricity and energy in general in the more developed parts of the world is constantly rising. The increasing demand for fossil fuels and the dependency on oil can also be seen as the cause of more and more greenhouse gas, which is slowly destroying our environment. If we damage ecosystems, harming ourselves is the direct consequence of our actions. It may not be seen immediately, but negative consequences are certain. Through the problem of climate change different people from different countries are brought together, to work on solutions and a certain ecological balance, which helps to stop the constant damage of our environment.

Italy, Slovenia and Turkey are three European countries in which the ecological balance is still at a lower level than in other parts of Europe. Therefore the project "Better Building – Certifying VET teachers as energy saving advisers. A transfer system into three different European societies" focuses on improving these countries' understanding and appreciation of the importance of saving energy.

Those three different countries struggle with a variation of environmental problems such as water shortage, danger of fires, floods etc. Through "Better Building" they will be given the chance to improve the handling with building materials, energy, combustibles and limited resources, which indicate a reduction of energy consumption, which, on the other hand, helps protect the valuable environment. The application of the projects outputs guarantees a large amount of benefits, on different sectors, for each country and its citizens.

The current situation in Slovenia

This chapter describes problems concerning environment, energy prices, energy consumption, etc. for every country. In order to achieve proper implementation of the project's results it is very important to be aware of the current situation in the different countries.

Noticeably, the whole world is dealing with energy costs and the constant increase of energy consumption. Our environment is endangered and everyone is able to notice the enormous impacts our inconsiderate behaviour entails towards our environment. A growing number of countries in southern Europe have to deal with water shortages and increased temperatures in the summer which is unfavourable for decent agriculture. Furthermore, autumn and winter are often affected by numerous floods that destroy villages and areas.

Therefore, it is our responsibility to become active in energy saving, which starts with switching off the light when you are not in the room, separating waste and reusing paper bags.

"Better Building" encourages citizens to completely change their behaviour regarding energy consumption. This project enables learning how to value and save energy, which also leads to financial savings.

The import of energy and primary products is a very important issue in Slovenia. The largest consumer is Slovenia's industry, followed by other sectors. The country tries to use renewable energy sources such as water and is critically examining the use of nuclear energy.

The primary energy supply is provided by oil- petroleum derivates, solid fuels and nuclear power, followed by natural gas, industrial waste and renewable energy sources like water.

Domestic energy production is based on nuclear energy and solid fuels. The increase of renewable energy is also recognized. [2]

The assessment of the net electricity production in June 2007 shows that hydro energy is the most used sector with 35,6%, closely followed by thermal sources with 33,8% and nuclear energy with 30,6%.[1]
According to the energy consumption in households, most energy is used for domestic appliances with 44%, followed by hot water with 25%, heating with 23% and cooking with 8%.

The age of buildings

The evaluation of this topic shows that 41% of Slovenian buildings are 20 to 40 years old and 23.5% are more than 55 years old. The most common building materials in Slovenia are bricks and mortar.

Recent ecological disasters in Slovenia

Due to climate changes and the green house effect, Slovenia had suffered two major disasters in 2007 and 2008.

- The first one happened in a small village in the North Western part of Slovenia – Zelezniki. Due to a very strong storm, the river Sora overflowed and destroyed the territory, including cars and houses. The rescue team needed several months to rehabilitate the affected area.
- The second disaster took place in Kamnik, near the Slovenian capital, Ljubljana. A very strong storm destroyed many trees and the city's area. According to the elderly habitants, this storm was the biggest disaster ever. The most interesting thing about that storm is the fact that it is more typical for the American coast than for Slovenia or Europe.

These events indicate dramatic climate changes that have an enormous impact on everyday life. It is hard to conclude that these disasters are simply anthropometric, but the climate change can definitely be decelerated by the earth's population.

Difficulties due to climate change

The more noticeable impact of climate changes can clearly be seen in agriculture. Lack of food may cause big problems in the future.
In 2003, Slovenia suffered one of the biggest droughts in the last hundred years.
That drought affected especially the crops that need more water to grow. Due to a shortage of food, Slovenia was forced to import it, which consequently led to increased food prices. The draught affected farmers, who afterwards received support from the government in order to recuperate from the disaster.
Another issue is the increase of pest, due to mild winters in Slovenia. This phenomenon could be noticed mainly in the last 30 years and it causes major damage. Hence, more pesticides have to be utilised in order to get rid of pest.
These factors cause the creation of a vicious circle in which water, air and soil are even more polluted.

The above mentioned disasters and problems indicate that in the future major steps have to be taken in order to save the environment and our lives.

3) The Kyoto Protocol

The Kyoto protocol is a very important document in environmental politics, because it aims at an international conscience about our environment and the protection of it. In this chapter, we will shortly describe the history of the protocol and its goals, to give some short overlook about international sanctions set on this very important topic.

The Kyoto Protocol describes the agreement under the United Nations Framework Convention on Climate Change (UNFCCC). States that participate in this agreement commit to reducing their emissions of carbon dioxide and five other greenhouse gases, in order to protect our environment and prevent dramatic changes in our environment due to inconsiderate behaviour of the world population.

In December 1997, the participants of a meeting in Kyoto agreed on the development of the Kyoto protocol. In May 2008, over 180 parties agreed to fulfill the requirements of the protocol. In 2012, the first commitment period of the Kyoto protocol is going to end, meetings that discuss another period after 2012 have started in May 2007.

36 of those parties are developed countries (also known as Annex I), all of those parties are instructed to reduce the greenhouse gases to the terms that are individually defined for each country.

137 developing countries have agreed on the protocol, including such countries as India, China and Brazil. They, in comparison to the developed countries (also known as AnnexI), are not forced to do anything else than reporting and monitoring their countries' emissions.

Among all the countries that agreed on protecting the environment there is also one developed country that did not agree on the protocol's terms – the United States of America. This country is known as one of the most polluting countries in the world. Nevertheless, the USA just have signed the Kyoto protocol but have not ratified it yet.

To give a short overview on the goals and principles of the Kyoto protocol:

- The protocol is underwritten by governments and is governed by global legislation issued under the UN's aegis.
- There are two different types of governments:
    - Developed countries (Annex I) which agreed on the terms and have to report and monitor their emissions annually and also reduce the emissions.
    - Developing countries (Non – Annex I) which are not forced to reduce emissions, but they have to report and monitor their countries' emissions, and may participate in the Clean Development Mechanism.
- If any Annex I country fails to achieve the goals of the protocol they are penalized.
- Annex I countries have to diminish their greenhouse gas emissions by a collective average of 5% below their 1990 levels.

The EU and the Kyoto Protocol

22% of global greenhouse gas emissions are produced by the EU, therefore the EU has been one of the biggest suporters of the Kyoto protocol, always trying to convince other countries to participate in this long-term project. The EU itself and its member states are participants of this project.

In 2008, unfortunatley Greece was excluded from the Kyoto protocol, because the country failed in monitoring and reporting emissions to the responsible parties.

The member states of the EU all have individual obligations set in the treaty. The less developed countries do not have guidelines as strict as the more developed countries in the EU.

PART II

The target country – Slovenia

4) Target groups, human and financial resources

In order to spread the idea of Better Building, we invite the readers to address the needs and products to the accurate companies, organisations and people. We are certainly aware of the fact that this endeavour will require human and financial resources. The following chapter will therefore adress some issues in this regard.

Interested parties – and target groups - in the project's outcome could be:

- employers
- those interested in AVT
- teaching staff
- interested parties
- VET providers
- educational policy makers
- social partners
- key actors for company's training but also for active labour market in the respective ministries and the labour market administrations

Human Resources

Stakeholders are an important factor because they may influence the inclusion of the Better Building idea. The following list indicates the potential stakeholders who are involved in promoting the diffusion of energy efficiency and renewable energy sources in Slovenia.

Possible stakeholders:

- Vocational training authorities representatives
- Public Authorities in the energy/constructing sector field
- Public Employment Service
- University: department for lifelong learning for adults
- University: department for engineering/ architecture/construction
- Consultants/experts in the energy sector field
- Expert trainers in technical subjects in the construction field
- Trainers for vocational training
- Regional energy/environment related companies/Agency
- Local development agencies
- Professional associations of the energy/constructing sector
- Service providers in the field of building construction and energy efficiency matters
- Other

These potential stakeholders are invited to explore other Better Building products and suggest how they could be introduced into the daily practice of education and training providers. Better Building issues can be included in their daily work.

Financial Resources

In order to achieve the project's goals, both financial and human resources are extremely important. Support can be obtained within the company or organisation, or outside. As Better Building is a project which aims at saving money and protecting the environment, there is a variety of financial resources available:

- Public initiatives - of ministries and organisations at the national level (department of environment, department of education, department of agriculture, department of health, etc.) and the organisations at the international level (EU, UNEP, OECD, etc).

- Private initiatives – each company that is interested in financial savings due to efficient energy use and new construction methods, or NGOs that are interested in protecting the environment etc.

5) Target Groups in Slovenia

The attention of the following groups – important for the mainstreaming and implementation of the Better Building outcomes - can be stimulated by presenting the project, its goals and positive impacts.

Ministry of the Economy

Energy supply subsector:

- Energy supply and EU affairs
- Energy planning and development
- Database management and economic analyses in the energy sector
- Restructuring of companies in the energy sector

Ministry of the Environment and Spatial Planning

- providing accommodation/housing for everyone
- binding settlements in the new social and spatial cohesion and achieving a higher level of interaction

- ensuring conditions for everyday life in historical urban centres
- limiting dispersed construction and construction of uninhabited areas
- ensuring that heating, cooling and illumination of buildings do not damage the environment in the future
- protecting national, regional and local characteristics of the land, its architecture and landscape
- ensuring the development of modern architecture

Eco schools

Their aim is to spread the awareness of energy saving among children. The group's attention can be gained through the presentation of the programme shown in a way that is suitable and understandable to the children.

Companies that sell and build eco buildings

In Slovenia, there are some companies operating in this field. They can be attracted by a well designed project presentation sent via email.

Individuals: People who are ecologically aware

Their attention could be gained by publishing articles in journals that cover environmental issues.

VET providers

The attention of these schools could be gained by the presentations of the project, its purpose and goals. They would include:

High schools of civil engineering (post-secondary non-university):

- high school of civil engineering in Maribor
- high school of civil engineering in Ljubljana
- high school of civil engineering in Celje
- high school of civil engineering in Novo mesto
- high educational school in Kranj
- areas of education in masonry, sculpturing, construction field, carpentry

6) Human resources in Slovenia

Vocational training authorities

The National Education Institute:

Fields of work:

- monitoring the process of education
- monitoring the students' position at school
- monitoring the teachers' position in the educational process
- monitoring the principle of individualization
- assessing the system solutions on students' achievements
- enabling reading, functional literacy and numeracy
- ensuring development and preparation of didactic guidelines
- monitoring students' achievements
- following-up the international researches and new trends of knowledge
- updating curricula
- implementing new learning approaches into practice
- providing teachers' training (knowledge trends, learning and teaching approaches)

Public authorities related to energy

- Ministry of Economy (see above)
- Ministry of Environment and Spatial Planning (see above)
- Labour administration representatives
- Employment Service of Slovenia

Fields of work:

- increasing employment
- enabling successful vocational development
- ensuring social security to those entitled
- ensuring equal service quality in Slovenia

Slovenian Institute of Adult Education

Fields of work:

- Development of the adult education (AE) system
- Development of a quality assurance system in AE
- Information and guidance in AE
- Adult education and training
- Adult literacy
- Development of non-formal learning
- Validation of non-formal learning
- Promotional activities
- Information/IT support
- Departments for engineering/architecture/construction
- Faculty of civil engineering in Ljubljana
- Faculty of civil engineering in Maribor
- Faculty for architecture in Ljubljana

Consultants/Experts in the energy sector

Institute Jozef Stefan - department for energetic efficiency - Energetic advisory office in Ljubljana:

The office consultants offer to the citizens free of charge counselling about efficient energy use, reusable energy sources and reducing energy costs.

Regional energy/environment related companies

Environmental companies

Environmental companies are (i) *Optima Glavica* that produces eco friendly buildings, (ii) *Arhem* that works in the area of passive building and counselling and (iii) *Telmos* that produces low energy houses with heating and cooling devices. These three are only a few examples. More companies in Slovenia could be interested in being involved in the Better Building project.

Local development agency

ANV Slovenian team:

The aim of the union is to spread ecological awareness and offer solutions on all segments concerning environmental protection.

7) Financial resources in Slovenia

Financial resources, together with human resources and personal initiatives, will be of major importance for the inclusion of the project outcomes. Financial funds might be gained with the support of the following organisations:

- Ministry of Economy
- Ministry of Environment and Spatial Planning
- Ministry of Labour, Family and Social Affairs

8) Training

Training is a very important factor of the project and its continuation. In order to convince stakeholders/people/companies/organisations etc. that Better Building is a brilliant project, its numerous positive effects should be presented very well.

A few elements that present the benefits of Better Building are:

- **Money savings**: heating and energy costs will decrease with the use of new building materials, which means enormous savings for big companies, organisations etc. and also for an individual household.
- **The future of children**: our environment is very precious and its protection is very important for ensuring better living conditions for our children
- **Protection of environment**: human beings and the environment are interrelated, therefore we need to change our behaviour to stop pollution and start protecting the environment

- **Education**: lifelong learning is a very important topic in companies, because it helps improving skills and thereby the company itself
- **Incentives**: companies often receive incentives from the state for training their employees.
- **Bonus agreement**: if an employee attends training, he/she gains new knowledge which is important and helpful for the whole company or organisation. That is the reason why some employees may receive a bonus for making an effort.

Training duration

The duration of the training depends on the participants and their goals. The aim of the "Implementation Concept" is to address VET providers, as well as educational policy makers, social partners and key actors for company trainings. Different ministries and the Employment Service of Slovenia possess different knowledge and interests, therefore two different possibilities of training duration can be further examined:

- **Intensive training course:** a shorter version for those who do not have much time for learning/training, e.g. managers, chief executive officers, etc. This type of course could be held during breakfast or lunch, or like Franklin D. Roosevelt's famous fireside chats.
  The training should include a brief summary about the theory, the practice and important facts that confirm the project's profitability.

- **Extra occupational**: ideal for those who are very busy during day time. One learning unit can last two and a half hours including a break; the unit could be held early in the morning before students go to work or afterwards. Since students are very busy, learning units can last two weeks. In order to prevent the loss of information at the end of the training, handouts of each

unit should be provided by the trainer or participants who can create their own handouts and share them with their colleagues.

Training contents

The training contents will be different according to participants' various needs. In general, the training should contain the most important facts of the project and its benefits for the company or organisation in order to raise the interest for Better Building.

- **Introduction** (presentation of the project, its goals and positive impacts: saving money is very important and should be presented in a very positive way in conjunction with the protection of environment)

- **Theory** (the specific measures of Better Building are described in this part; interested parties can be included in the learning process with interactive learning methods such as graphs, videos, music, etc.)

- **Practical experience** (if enough time remains, it is very useful to present the project's achievements)

- **Follow-up** (after the project's presentation to the interested parties, information in the form of a website, flyer, handouts etc. should be provided. The project partners' contacts in the respective country should also be available, in case of any pending questions left).

9) Educational status quo in Slovenia

When discussing training, the objective of this document is not only to raise awareness among readers and to spread the idea of Better Building in Slovenia but also to help implementing the Better Building products into training and educational policies. Since the target groups are representing different educational spheres, this chapter will deliver some facts in regard to the current situation within the Slovene education and training systems. The focus is on the contents that provide technical competences concerning construction, with particular attention to energy-efficient matters.

In the last five to ten years the lack of VET students in Slovenia has been recorded, especially in construction programmes at the national level 3, 4 and 5.

- Level 2-3 (construction, mason)
- Level 5 (environmental tech., constructional tech.)
- Level 7 (landscape arch., architecture, civil eng., energetics)

VET Courses

Environmental technician

It is a newly established professional vocational training programme, which lasts 4 years. After the completion of this course the students are capable of working in the construction sector.

After successful schooling, the students are acquainted with the following:

- environmental protection
- eco friendly technologies
- technical drawing and computer skills
- material and environmental legislation
- waste management
- drinking water management

Constructional technician

This course is one of the professional vocational training programmes, which requires 4 years of schooling.

After successful schooling, the students acquire knowledge and skills in the following topics:

- Analysis of the construction's procedure
- Choosing the appropriate technology
- Correct usage of material in construction
- Elements of different constructions
- Computer skills
- Ecological awareness, ecological approach and personal responsibility

PART III

Environmentalism

10) Creating environmentalism

As news show us more and more frequently, our environment is endangered. Through the thoughtless use of natural resources and the lack of "green thinking" many negative consequences can be seen.

Those consequences may not affect us in a great extent right now, but if you look closely you can see that our future and our children's future is ill fated. If we continue living like this, the ozonosphere will be destroyed, forest and glaciers will become smaller year by year and there will be more unbearably hot summers, which will cause water shortages and erosions all over the planet. Other consequences of such a lifestyle could be floods and the end of limited resources like oil, which apparently would indicate abnormally high energy costs.

In order to protect the environment, we have to change our lifestyles and become involved with the idea of green thinking. Through this, we all will be able to kill two birds with one stone: protect our environment for us and following generations and save money!

This could be achieved through several laws, act and programmes but also by simply changing your daily behaviour regarding energy consumption. This chapter will feature the most important laws, acts and programmes and describe them briefly. First there will be laws, acts and programmes described that are based on the EU level and afterwards a country specific description of laws follows.

EU LEVEL

Laws, acts and programmes developed in the EU are a very important factor to protect the environment. We will briefly describe the current and most important ones, which try to create a conscience about protecting the environment, among citizens, companies and other parties. European environmental policy takes shape by means of regulations, directives, decisions, communication and recommendations.

- **Communication from the Commission to the European Council and the European Parliament of 10 January 2007, "An energy policy for Europe"**

This paper represents the Energy Policy for Europe to commit the European Union to a low consumption economy based on more secure, more competitive and more sustainable energy. It highlights priority energy objectives to be shared by all the Member States. The energy Package is part of the movement begun by the Green Paper on a European Strategy for Sustainable, Competitive, and Secure Energy in March 2006.

The purpose of the papers is to introduce a complete set of European Energy Policy measures, which applies to:

- The Energy Market
- The supply for oil, gas and electricity
- Greenhouse gases and Emissions Trading System
- Energy efficiency measures
- Renewable energy
- Energy Technology
- Nuclear energy

Through this paper, different targets should be reached:

- an EU objective in international negotiations of 30% reduction in greenhouse gas emissions by developed countries by 2020 compared to 1990, or at least achieve a 20% reduction of greenhouse gases by 2020
- increasing the level of renewable energy in the EU's overall mix from less than 7% today to 20% by 2020

The main aspects of this programme are to give a strategic review of the European energy situation and introducing a complete set of European Energy Policy measures – The Energy Package.

- **Communication from the Commission of 19 October 2006 entitled: Action Plan for Energy Efficiency: Realising the Potential**

In its Green Paper on the European Energy Strategy, the Commission underlines the need to strengthen its energy efficiency policy. In addition, the target for a 20% reduction in energy consumption set in this Action Plan is part of the measures requested by the European Council in March 2006 to ensure the environmental feasibility of European Energy Policy.
Its purpose is to mobilise the general public, policy-makers at every government level, citizens and market actors, and to transform the internal energy market in a way that provides EU citizens with the most energy-efficient infrastructure, products, and energy systems in the world.

In particular, it applies to:

- Energy performance requirements for energy-using products, buildings and energy services
- Improving energy transformation
- Transport
- Financing energy efficiency, economic incentives and energy pricing
- Changing energy behaviour

Through these measures by 2020 energy demand should be controlled and reduced; 20% of annual primary energy consumption should be saved. On sectors like residential and commercial buildings, manufacturing industry and transport the chances of saving energy are very high. The reductions of energy consumption in those fields could save about 390 million tonnes of oil, which also indicates reducing gas emissions.

The main aspects of the programme are presented in the six-year Action Plan, which presents the best measures on a cost-efficiency ratio:

- Improving energy performance
- Reducing heat loss in buildings (passive houses)
- Improving energy transformation
- Limiting the costs linked to transport
- Financing, incentives and fares
- Changing behaviour
- Adapting and developing international partnerships

- **Commission Green Paper of 8 March 2006: "A European strategy for sustainable, competitive and secure energy"**

This Green Paper marks an important milestone in developing a common energy policy by regrouping the disparate range of energy policies into a common strategy for Europe. Its target is to reduce the energy consumption until 2020.

The paper applies to:

- sustainability - to actively combat climate change by promoting renewable energy sources and energy efficiency
- competitiveness - to improve the efficiency of the European energy grid by creating a truly competitive internal energy market
- security of supply - to better coordinate the EU's supply of and demand for energy within an international context

The main aspects of the paper are split into six different areas:

- Energy for growth and jobs: completing the internal energy market
- Security of supply: solidarity between Member States
- Towards a more sustainable, efficient and diverse energy mix
- The EU at the forefront of tackling climate change
- Research and innovation at the service of Europe's energy policy
- Towards a coherent external energy policy

- **Commission Communication of 10 January 2007: "Renewable Energy Road Map. Renewable energies in the 21st century: building a more sustainable future"**

The Road Map provides each Member State with mandatory targets and action plans in line with its potential. It aims at reducing emissions and increasing the security of energy supply, and creating a legislative framework to enhance the promotion and use of renewable energy. These action plans must include specific measures and objectives for the three following sectors: electricity, bio fuels, heating and cooling.

The main aspects of this programme are:

- proposing measures to improve the internal market and remove the barriers to developing renewable energy in the electricity sector, the heating and cooling sector
- proposing measures to support, encourage and promote renewable energy sources, including an incentive/support system for bio fuels and the use of public procurement, particularly in the transport sector
- continuing to cooperate closely with those involved in the renewable energy sector
- encouraging optimal use of the existing financial instruments
- ensuring the continued exchange of best practices and the inclusion of the external costs of fossil fuels in their price
- encouraging Member States and local and regional authorities to make maximum use of the instruments available to them and promote the development of renewable energy sources

- **Directive 2002/91/EC of the European Parliament and of the Council of 16 December 2002 on the energy performance of buildings**

This programme promotes the improvement of the energy performance in new and existing buildings; it ensures the certification of their energy performance and requires the regular inspection of boilers and air conditioning systems in buildings.

Targets to be reached:

- a common methodology for calculating the integrated energy performance of buildings
- minimum standards on the energy performance of new buildings and existing buildings that are subject to major renovation
- systems for the energy certification of new and existing buildings and, for public buildings, prominent display of this certification and other relevant information.
- regular inspection of boilers and central air-conditioning systems

Laws, programmes and acts in Slovenia

Energy Law (1999). OJ RS 79/1999, Law on changes and competition of Energy Law (2004, 2006, 2007).

This law defines rules regarding Slovenia's energy policy, energy market, public utility services, introduces a concept of sustainable energy supply and efficient energy usage and it establishes conditions for energy actions. The government is obligated by law to produce a national energetic programme every 5 years.

It applies to:

- the Energy Market
- the supply of oil, gas, electricity and other energy sources
- energy efficiency measures
- renewable energy
- Agency for Energy
- public utility services in the energy field

The main aspects are:

- safe and efficient usage of energy
- market principle of energy distribution
- consumer rights in the energetic field
- efficient control over energy distribution
- stimulation of renewable energy sources
- introducing Agency for Energy

Law on building construction

This law regulates all aspects in building, including the environmental aspect. Its purpose is to regulate the construction of buildings. This law does not define any aims. However, if the law is violated, financial punishment is imposed.

It applies to:

- Building construction
- Building permissions
- Building phases

Before the construction of a building starts, a constructor has to apply for and receive a building permit. This allows coverage of environmental requirements on construction sites. By issuing these permits law also provides for environmental protection.

PART IV

Drivers

11) Drivers for Slovenia

In addition to legal regulations some other drivers can act as activities which may contribute to raise public awareness on the Better Building and environmental issues. One way would be offering services, like counselling, training and courses. The Better Building project has developed a "Modular Curriculum and Teaching Materials" to increase the public sensitivity concerning energy saving possibilities, the use of renewable and ecological energies, etc. The main objective of the "Guidelines" is to provide recommendations to VET teachers, in order to make the modular curriculum didactic as effective as possible focusing on the main variables in the training design process. In particular, the final product consists of 5 chapters:

CHAPTER 1:

Team building: this chapter discusses the importance of team building among students and teachers with the purpose of building a productive relationship which presents a basis for an effective didactic process that stimulates an interactive/dynamic approach.

CHAPTER 2:

Training needs evaluation: this chapter examines the importance of assessing the specific training needs as the components of the class with the purpose of tailoring the didactic level of the subjects to be developed.

CHAPTER 3:

Personalization: in this chapter a special emphasis is given to personalization of the didactic approach with the purpose of adapting it to the student's abilities and knowledge and therefore, making the learning objective more realistic/successful.

CHAPTER 4:

Didactic methodology: this chapter deals with the importance of creating strategies and tactics that will make the educational process more flexible and efficient. Priority is given to the methods and procedures that have a character of cooperation and activities.

CHAPTER 5:

Evaluation of the learning process: this chapter is dedicated to the role of evaluation in a process of developing effective didactic contents and learning objectives.

Evaluation is one of the most important components of the learning process. It enables developers to check if the attributes of the designed programme satisfy all the requirements established at the beginning of its development as well as if the didactic content provides a sufficient support for achieving the educational goals of any given situation. Data collected through evaluation are of vital importance, particularly when/if the requirements or educational goals are not met.

12) Tools and instruments

Tools and instruments are used to spread the idea of Better Building. Those tools and instruments have a very important function and it is not possible to imagine the project without them. Thus even after project funding will end, it is recommended to continue using such instruments. Here is a list of the most common tools:

- Websites
- Handbooks
- Leaflets
- Bills

Through distributing those tools and instruments, the idea of Better Building is presented.

Another important tool presented in this chapter is the press release. With the help of journalists, reporters etc. the idea of the project can be presented to a large amount of people.

Press Release

To publish and distribute a press release about your topic you need to follow three important steps, which will be described underneath.

Three steps:

1) First, you have to find a topic related to the Better Building project you want to publish something about.

2) After your topic was found you have to search for different mediums into which your topic fits (print, radio, TV, online, news agency,…)

Print:

It will always be easier to get your topic published in a daily regional newspaper, than in a weekly national newspaper. The regional papers have to fill their pages and are happy to receive interesting input from you.
If you want to contact a newspaper always be aware that editorial meetings are set in the morning, thus the best time to call a journalist or reporter is between 12 and 14 o'clock.

News agency: (e.g. Associated Press Agency in New York)

To bring a news agency to publish your press release would be very helpful. News agencies provide every medium with information about certain topics, if the editor is interested in your story your press release will be in the data base of the agency and journalists of all mediums have access.

Radio:

Be sure that your topic is interesting for a large group of people. Private radio stations will not air your topic, be sure to contact public radio stations that are interested in education and science.

You may be invited as a guest or an expert for a short interview, or you are asked to send the station some interviews with experts, so they can produce a short feature about your project.

The radio is a very fast medium, therefore listeners are not able to get through the material once again. If you are invited as a guest, make sure to speak clearly and to follow the guideline of the "cinema in your head", which means to create images in your interview or story.

TV:

TV is again a different medium because it needs to have pictures. Be sure to be on the spot if a journalist asks you for an interview etc. Do not be afraid of being on television, focus on the reporter and speak clearly.

Online:

Online media are again a very fast medium, journalists have to be very fast and are under much pressure, and therefore they do not have any time for you. You have to be sure to prepare your press release including everything (pictures, recordings, links, etc.)
Once you have decided in which medium you want to be released you can start to write your press release, regarding the requirements.

3) How to write a good press release:

In order to get published, your topic needs to be interesting for journalists, media and their readers. The text you write has to be very well written, thus online magazines or newspapers can copy it and put it online/into the paper without changing very much.

To be sure to produce a very good press release that draws the attention of a journalist, always be sure to follow the **AIDA** formula:

- **A** – Attention: the journalist recognizes that a press release comes in
- **I** – Interest: he or she is reading the press release
- **D** – Desire: he or she wants to publish an article about the topic
- **A** – Action: he or she copies the release into the editorial system, copies or recopies it or gets in touch with the author, to arrange a meeting, an interview etc.

The Press release:

- Who?
- What?
- When?
- Where?
- How?
- Why?

Always be sure to focus on those very important questions and answer them in your written release. Be sure to answer those questions as accurately as possible, because facts are very important in a press release – detailed information makes a topic even more interesting.

The structure of the press release is very important to be sure that a journalist does not lose interest in it after the first few sentences. The most important issues are presented here:

Headline: find a very good headline for your topic, in which an explicit statement can be seen. The headline should be very interesting for the reader.

Subheadline: this line explains the headline

Introduction: this lead sentence should arouse the readers' interest, after this lead sentence you can start to answer the W questions in the main part.

Main part: In this main part you have to use short sentences, active verbs, avoid shortcuts, express yourself gender-neutrally, refer to names and regard a very good layout with numerous breaks and line spacing 1.5. Do not write more than two pages and just print on one side.

Contact details: Always be sure to add your whole contact details! This is very important for the journalists, if they have any questions or requests.

Example for a press release:

Renewable energy progresses in Europe

Source: *New Zealand Government*

Published Oct. 21, 2008

The European Wind Energy Technology Platform (TPWind) has predicted that more than a quarter of the EU's electricity could be provided by wind by 2030. TPWind was formed in 2006 to research and reduce the social, environmental and technological costs of wind energy and involves the expertise of more 150 wind experts. In its newly released Strategic Research Agenda (SRA), TPWind says wind energy could account for 12-14 percent of the EU's electricity consumption by 2020 (representing a total capacity of 180 gigawatts), and this could increase to 22-28 percent of consumption and 300 gig watts by 2030.

However, the SRA points out that this vision poses major industrial and technological challenges and investment in wind energy needs to be coordinated at national and European levels.

Meanwhile, Opel International Inc is forging ahead with solar energy in Spain.

The company, which is an international developer and supplier of concentrating photovoltaic panels, has applied, along with its partners, for consent to build a solar grid field.

The field would be capable of more than 700kW with Opel supplying the project with its Mk-I high efficiency concentrator panels and dual axis trackers.

The combination of products would ensure the grid field yields the maximum number of kilowatt hours possible.

Following its completion, the field would be owned by a third-party group acting as power suppliers.

The plan for a grid filed is attributable to upcoming changes in Spain's solar feed-in tariff structure. These changes are expected to result in a favourable operating cost structure for the eventual operators of the grid field.
(http://www.environmental-expert.com/resultEachPressRelease.aspx?cid=28058&codi=38894&idproducttype=8&level=0)

Specific challenges with press releases in Slovenia

In Slovenia it is very common that you have to pay for space if you want to publish an article in magazines and newspapers. Even the small local newspapers charge you for using space.

Another important factor is the copyright problem. Released texts have to have a detailed bibliography that describes which books, websites and other sources were used.

13) Impacts and positive effects

Through Better Building we hope to achieve two main impacts:

- **protecting the environment and**
- **saving money on various sectors!**

To be able to profit, ministries, big organisations and companies have to be the messengers for all men, women and their households.

Better Building is a one time opportunity to save money for everyone from households to big companies. Through the renovation and regeneration of buildings expenses regarding energy costs can be minimized, e.g. if you isolate an old building the costs for heating or air condition will only be a small percentage of the usual costs.

The outcome of Better Building can be seen if we take a close look at the insulation topic. Households spend about three quarters of energy costs on heating. If you start renovating and exchanging your old materials you can be sure to save up to 20% of your usual energy consumption.

Therefore, every big company, factory and organisation should start thinking about how to create buildings that save energy. The bottom line of all those energy saving measures is saving MONEY!

14) Evaluation

This chapter provides information on how to evaluate and control the multiple outcomes of the project.

In general, there is a variety of environmental reports in every country. Companies for example have to annually report their action plans against pollution, show their statistics etc.

How to evaluate the outcomes of the project

The outcomes of the Better Building long-term impact could be evaluated through different indicators such as

- number of stakeholders involved
- kind of stakeholders involved
- number of contacts (new/old) to ask for more detailed information on the project
- implementation of a training course including parts of the didactical curriculum developed within the project
- feedback of the trained people
- improvement of existing training courses thanks to tools developed within the project
- connection with other EU projects on similar subjects to multiply the effects and results

Here, the respective stakeholders have to think of more indicators and milestones related to their organisations and institutions as well. The above mentioned could be seen as prompts to start thinking of the most important ones in your organisation.

PART IV

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