

# Teaching and learning made easy: strengthening of the European Sustainable Energy Education Forum (ESEEF)

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## Keywords

education, information, children, sustainable energy, awareness, quality, effect, availability, inspiration, co-operation, database, network, policies, Pan-European

## Abstract

The Altener project; European Sustainable Energy Education Forum (ESEEF) is a Pan-European network of organisations and institutions working with sustainable energy and education at a primary and secondary school level.

The project aims to inspire and facilitate the teachers' assessment and application of existing EE educational programmes. It will further develop the network and provide up-to-date access to information on education on RES. The forum would like to help schools, teachers and students working with renewable energy to get in contact with partners in other countries. The forum shall be given the necessary significance and impact and make it useful for the key publics.

Now the challenge is to ensure a great number of users in each country!

## Introduction

*The European Sustainable Energy Education Forum (ESEEF)* has operated for almost two years and has currently 36 member organisations from 19 different countries. *European Sustainable Energy Education Forum* is a follow-up to the project *European Energy Education Forum (EEEE)*, a project that was supported by the EU's Altener program of 1999-2000, which intended to kick-start a European network of

organisations working with renewable energy sources education.

The project partners are *OVE – The Danish Organisation for Renewable Energy (Denmark)*, *Motiva (Finland)*, *NEE – Norwegian Energy Efficiency Inc. (Norway)*, *Meridiani (Italy)*, and *WSBIC – World Solar Business and Investment Council (France)*.

These five countries have some of the most comprehensive energy education programmes in Europe and the partner organisations are among the key actors in their representative countries within the fields of *Rational Use of Energy (RUE)* and *Renewable Energy Sources (RES)*. However, a special effort will also be made to target Belgium, Switzerland, Spain, the Netherlands and Sweden, since they are the main targets for traditional educational study tours of the project partner countries, and activities within renewable energy sources and rational use of energy can therefore build on existing practice.

During the project period, various energy educational activities were carried out, and information on energy education from Denmark and England was gathered and presented at the homepage [www.school4energy.net](http://www.school4energy.net). At the same time, contact was made to several relevant organisations in Europe. At the end of the project period a conference was held, where it was agreed to establish a European network.

## Goals and Objectives

The project's main goal is to expand the European Sustainable Energy Education Forum database, to promote the existence of the network to teachers, education institutions

and ministries and to host a conference on the existing network and promote Energy Efficiency & Renewable Energy Sources.

The emphasis of the project will be to collect illustrative examples and experience from the teachers' or students' perspective as well as gather information on relevant web-resources to visit and other available materials. The network concept is based on the assumption that it is easier for teachers and organisations to address Rational Use of Energy and Renewable Energy Sources in their education if they have access to examples of education made by others. An important element of the network is therefore the collection of illustrative examples and experience, which is made accessible on the homepage to the teachers, as well as establish contact between developers and educators across country borders.

#### EARLY-AGE-AWARENESS

It is believed that *early-age-awareness* is essential in order to reach a *long-term sustainable use of energy resources*. It is therefore important to give children energy awareness in order for them to become responsible consumers and behave sensitively to issues concerning sustainability of the resources. The schools and the teachers play an important role in this.

However, throughout Europe and between schools, the education offered in this field varies greatly. Teachers and developers of Energy Efficiency education programmes are the *key target groups*. On a teacher-level, skills and easy access to quality tools and programmes is vital to a widespread effort in primary and secondary school.

One can therefore say that one barrier to teachers taking up sustainability, Energy Efficiency, and Rational Use of Energy as a subject is difficult access to information on the subject and lack of ideas on how to make the subject interesting to the pupils/students. The ESEEF network aims to remove this barrier. Furthermore, the individual organisations supporting the efforts of the teachers benefit from contact with peers to get inspiration.

#### EXCHANGE CENTRE FOR INFORMATION

The homepage has become the main portal for the network, and the *main objective* is that each participant shall try to contribute with relevant information to the homepage. Thus, it aims to work as an exchange centre for information and ideas, which is also accessible for teachers and pupils/students.

In addition to exchange information on the homepage, the network is also being used for exchanging information about ongoing activities and involvement of new organisations. By now, status indicates that interest in the network prevails, but the use of and the input to the homepage should be improved to provide full benefit of the facilities. The challenge is to ensure a great number of users in each country!

By doing so, the forum will inspire and facilitate the teachers' assessment and application of existing Energy Efficiency educational programmes, and to further develop the network and give it the necessary significance and impact to make it useful for the key public.

## Activities

### THE PROJECT CONSISTS OF TWO PHASES, AND WILL INCLUDE THE FOLLOWING ACTIVITIES:

- Identify possible sources of examples (teachers and pupils/students). This should be fairly easy since one can benefit from the exhaustive lists of implemented EE-IET activities collected by the SAVE project EE-IET. (Evaluation of EE Information, Education and Training Programmes Targeted at Children and Development of Best Practice.)
- Collect examples from Belgium, Denmark, Spain, France, Norway, the Netherlands, Sweden, Finland, Italy and Switzerland (for example descriptions of energy education, with photos, etcetera), as well as information on education material and places to visit.
- Translate all examples collected to English and add them to the existing ESEEF database. The examples will then be available on the homepage both in the original language and English.
- Add the information on education materials and places to visit to the existing databases.
- Up-date and expand a list of relevant websites and promote a link to the ESEEF homepage to the relevant websites.
- Write press releases advertising the international ESEEF conference and plan the conference.
- Draft promotion folder in English on ESEEF (and RUE/RES) targeted at education institutions and ministries of education as well as other potential members of the European Sustainable Energy Education Forum and distributes it in France, Norway, Finland, Spain, Switzerland, Belgium, Denmark, Italy, the Netherlands, and Sweden.
- Host an international ESEEF conference and write a press release on the outcome.
- Translate the promotion folder to the languages Danish, Dutch, Finnish, Flemish, French, Spanish, German, Italian, Norwegian, and Swedish.
- Distribute the promotion folders to the relevant parties.
- Partake in five seminars or conferences organised by other parties, with the aim to present the project and the ESEEF network.

## Expected Output

Through collecting, categorising and presenting existing programmes, teachers, professionals and developers are provided *the most preferred place to search for relevant information*. The development of the database is conducted in co-operation with all users to ensure quality of content and structure. By categorising the various projects and programmes according to aspects that are decisive for employment of the programmes, such as complexity, duration, pedagogical/educational preferences, it is believed that users will find this a triggering factor and an effective tool.

The output of the project will be **improved awareness of the ESEEF network and more information on Energy Efficiency and Renewable Energy Sources education activities on the ESEEF homepage**, which in turn is expected to increase the number and outcome of energy educational activities.

The availability and knowledge of the programmes and their effect should lead to more Renewable Energy Sources education and, equally important, better quality programmes. Such knowledge is essential in order to make teachers and pupils inspired by the subject.

*In the long run* the Altener project ESEEF ensures that such knowledge is disseminated to decision-makers of tomorrow, in order to **increase good practice throughout Europe**. This will in turn help creating a sound environment for companies to develop and market sustainable energy solutions.

## Expected Outcomes

### THE DIRECT OUTCOMES OF THE PROJECT ARE:

- Minimum ten to twenty new examples, i.e. descriptions of energy education, with photos, etc. from the partner countries Denmark, Finland, Norway, France and Italy, and make them accessible on the ESEEF homepage.
- Minimum five to ten examples from each of the contact countries; Belgium, Switzerland, Spain, the Netherlands and Sweden accessible on the homepage.
- Translation of all examples collected in relation to this project to English. The example will then be available on the homepage both in the original language and English.
- About 50-75 new education materials added to the existing database of education materials. This could for example be material used in relation to one of the described examples but also other material.
- Minimum five to ten qualified web-resources to visit per country investigated and added to the existing database, such as places especially aimed at young audiences.
- Up-dated and expanded list of relevant websites and possible also links from other websites to the ESEEF homepage.
- An international conference, including press releases before and after.
- A promotion folder targeted at education institutions and ministries of education.
- Distribution of the folder on the *European Sustainable Energy Education Forum* to education institutions and ministries of education (as well as other potential members of ESEEF) in France, Norway, Finland, Belgium, Switzerland, Spain, Italy, the Netherlands, and Sweden (OVE from Denmark is excluded since they already have contact to the relevant parties in their country).

### PROJECT IMPACT

As a result of the project and the improvements made to the contents of the existing ESEEF homepage, the project should ideally achieve the following **immediate impact**:

- A strengthening of the existing ESEEF network (more contact between members, new members, more input to the homepage, project partnerships).
- An increased awareness of the existence of ESEEF among teachers and educational institutions (more visitors to the homepage, more input to the homepage, more telephone calls/contacts made to the ESEEF members).

This should help create a sound environment for companies to develop and promote sustainable energy solutions. In the **long term**, the project will help ensure that knowledge about RUE and RES is disseminated to the decision-makers of tomorrow in order to increase RUE and the use of RES in Europe and help meet CO<sub>2</sub> emission targets.

## Dissemination Process

A well-organised dissemination of the homepage is essential for the project to be a success. This will happen on different levels and through several information lines.

*Good examples* from other schools are essential to encourage teachers to apply new subjects such as EE and RES and give them inspiration. ESEEF should be a great help for teachers and pupils/students throughout Europe who are working with sustainable energy.

The ESEEF homepage presents information about interesting materials, places to visit, and examples from education and links to information websites and relevant organisations. ESEEF also works as a contact agency for classes, teachers, and pupils/students who seek partnerships with schools, teachers, and pupils/students in other countries in relation to renewable energy education. *Electronic information e-mail* is distributed three to four times a year with information about updates on the web.

## WHO

The *five partners* in the project are all participating in local and/or international educational networks. Each partner will spread information about the ESEEF activities through these networks. In addition, the European Sustainable Energy Education Forum has more than 30 member-organisations in addition to the partners.

The forum has a *mailing list* with more than 300 relevant persons around Europe. The list is partly made in co-operation with International Network for Sustainable Energy (INFORSE-Europe).

The project furthermore aims to closely collaborate *with relevant projects*, mainly the SAVE-project called Kids4Energy ([www.kids4energy.net](http://www.kids4energy.net)). ESEEF is also co-operating with the TREE -project through the Leonardo Programme.

The partners will spread information about the network and homepage through participation in conferences, such as the International Symposium on Renewable Energy Education (ISREE) and the eceee 2003 Summer Study.

Teachers often make use of reference lists in books and links on homepages. The project-partners will do a profound work to have the European Sustainable Energy Education Forum and the homepage mentioned in relevant forums like schoolbooks and online educational material.

## HOW

The *project partners and other ESEEF members* will spread information and distribute the ESEEF promotion folder to their own networks of teachers and organisers. For example The Danish Organisation for Renewable Energy, the managing organisation, has through the Schools Energy Forum in Denmark access to a network of teachers representing more than 50 percent of the Danish schools.

The *ESEEF mailing list* will be used frequently. This is an effective list for dissemination as long as the topics are relevant to the recipient organisations and individuals.

There should be close co-operation with relevant projects, as well as presentation at the eceee 2003 Summer Study and other relevant arrangements. All *members of the network* will be strongly recommended to consider when projects relates to ESEEF and where the homepage can take an active part. All network members will also be asked to disseminate information about ESEEF at conferences/seminars.

It is time consuming but important to get an overview of *schoolbooks and online educational material*. Publishing houses for educational material and educational websites have reference lists, which are widely used by teachers. To get the necessary attention, it is important to get referenced accordingly. The project will address these information lines directly by e-mail, phone, and/or mail.

## WHEN

The main emphasis on the dissemination of the homepage and the results will be in *the second phase* of the project, when most of the input data for the databases is available. However, some of the information sources work slowly (such as printing of school books), and will consequently be contacted at an early stage of the project. The direct partners, the ESEEF members and the existing mailing list will also be activated from the start as these contacts both serve to help gather material and at the same time disseminate results. Co-operation with relevant projects and participation in conferences will be an ongoing activity, however, the dissemination emphasis will take place in the second phase, where also the ESEEF conference will take place. The experience from the *European Energy Education Forum* indicates that such a conference creates a momentum, which will be important in the dissemination process.

## Conclusion

This poster discusses how one by implementing a common information network and database on Renewable Energy Sources and Energy Efficiency is able to make common actions and decisions possible. Therefore, the homepage [www.school4energy.net](http://www.school4energy.net) can be an alternative to all the over-consumption messages available to the children.

The homepage is believed to be an effective tool for teachers and organisations in not only Denmark and England, but all over Europe. The homepage aims to inform and describe relevant programs, as well as establish contact between developers and educators across the country borders. This will help the teachers and pupils in their daily work, but also increase possibilities.

The project will, with the close work with other relevant projects (like the SAVE-project Kids4Energy), also improve the coordination between education projects in Energy Efficiency and Renewable Energy Sources. In the long run, this will help create a sound environment for companies to develop and promote sustainable energy solutions. Additional, the project will help ensure that knowledge about *Rational Use of Energy* and *Renewable Energy Sources* is disseminated to *the decision-makers of tomorrow* in order to *increase rational use of energy and the use of renewable energy sources in Europe – and to help meet CO<sub>2</sub> emission targets*.

It has lately (after suggestion from the European Commission) been decided that the ESEEF project will join forces in the coming project with an ISES (International Solar Energy Society) project (Solar Schools - Brighter Future). The ISES part will include partners from Bulgaria, Germany, Hungary, Poland, Romania, the United Kingdom. In these countries it will be gathered existing sustainable energy education material, which will then (if the rights can be obtained) be translated to the languages of the other countries.

The cooperation with ESEEF means that the materials will then be presented at the [www.school4energy.net](http://www.school4energy.net) website, which will make it even more interesting for teachers around Europe. It also means that the information brochure, which mentioned earlier, will be common for the two projects, and thus information about both projects will be distributed to even more countries.