



“Discover energy and talk about it” an environmental education programme for primary school pupils Pamplona City Council, Spain

Summary

The environmental education programme “discover energy and talk about it”, is aimed at primary school pupils aged 11 – 12 years and is promoted and financed by the Pamplona City Council (Ayuntamiento de Pamplona) through its Energy Agency.

The programme has been in place since 2001 and has as its principal objective education and awareness raising about energy. More than 6,000 pupils have participated in the programme. It is developed in workshops lasting one and a half hours per class-group within the schools. Workshops are participative and practical in character, and involve the pupils, teachers, other workers at the school and the pupils’ families and so encourage discussion between the generations. Throughout the programme information leaflets about energy, energy saving and renewable forms of energy as well as other teaching and promotional materials are made available to teachers and pupils.

End-user area

- New buildings
- Refurbishment of buildings
- Transport and mobility
- Financial instruments
- Industry
- Legal initiatives (regulations, directives, etc)
- Planning issues
- Sustainable communities
- User behaviour
- Education
- Other

Target Audience

- Citizens
- Households
- Property owners
- Schools and universities
- Decision makers
- Local and regional authorities
- Transport companies
- Utilities
- ESCOs
- Architects and engineers
- Financial institutions
- Other

Technical

- Energy efficiency
- Heating
- Cooling
- Appliances
- Lighting
- CHP
- District Heating
- Solar energy
- Biomass
- Wind
- Geothermal
- Hydro power
- Other

Context

In carrying out the Pamplona municipal energy plan, it became clear that the main challenge of bringing about climate change is not only technological but also social and educational. From this point of view environmental education plays an important role in achieving the necessary social changes in the fight against climate change. It was for this reason that Pamplona City Council in 2001 implemented the educational programme “Discover energy and talk about it” aimed at primary school children, supporting children’s right to education, and providing a way in which they can participate in an area that directly affects them, of which climate change is one example. Raising awareness in children is a way of guaranteeing that we have future generations of citizens who are aware of the environment. In addition, education of the child does not only involve the child himself but also raises the awareness of all those in the family around him.

Objectives

General Objective: To foster positive and respectful attitudes towards the environment through education and awareness raising in areas related to energy saving and efficiency, and renewable sources of energy.



Specific Objectives: To impart knowledge of the principal sources of energy; to understand the influence that energy has on people's lives so that they become aware of the environmental problems associated with the generation and consumption of energy; to identify how they consume energy in their daily lives; to involve children in the search for and application of attitudes that encourage the saving and efficient use of energy in all aspects of their lives, starting in particular with the group working to save energy in their own school; to raise the pupils' awareness of renewable energy in an enjoyable and attractive way and train them in its use.

Process

Each year, between June and September, once the relevant modifications have been made, as is appropriate to a programme which is continuously evolving, the calendar for sessions in the coming academic year is drawn up and circulated.

Sessions take place between October and June in the schools, during the standard school day and are one and a half hours long. By means of theoretical concepts and practical activities, various monitors ensure that the pupils get involved in the change that is taking place to the energy model and the search for and application of attitudes for saving energy and for energy efficiency in all aspects of their lives. Starting from an analysis of their own school's use of energy carried out by the pupils, the negative impact of the consumption of energy on the natural environment is explained to them, so that in the end it is the pupils themselves who identify and commit themselves to energy saving measures.



Photo 1: Sessions

Once the workshops are finished, they are evaluated by carrying out a survey, which involves both the pupils and the teachers. In January and June a report is compiled in which the results of the programme are evaluated, and on the basis of these findings modifications are made to the design of the workshops for the following year.

In 2001 a collaboration agreement was signed between Navarra Hydroelectric Energy S.A. and the Pamplona Regional Association to complete the programme with two other optional activities related to energy: a guided visit to "El Perdón" wind farm and a workshop on sustainable mobility and transport. Furthermore, since the academic year 2004-2005 schools have been offered the opportunity of a guided visit to the San Pedro Environmental Education Museum run by Pamplona City Council.



Photo 2: San Pedro Environmental Education Museum



Photo 3: Solar Kit

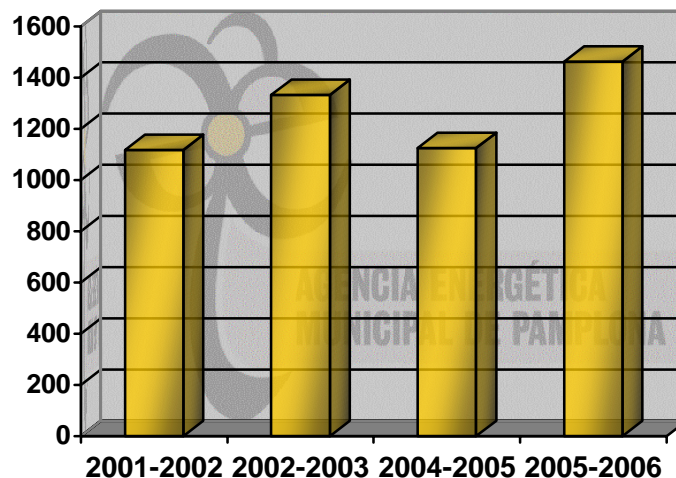
Pupils and teachers receive a energy guide, and several documents and material inside the programme. For example, last year the participant schools received a solar kit if they made a tracking of some indicators during a week.

Financial resources and partners

The budget for the programme for the year 2006 is €16,500, financed by Pamplona City Council. The programme has been subsidized for the last 4 years by the Government of Navarra to the extent of approximately 30% of the cost.

Results

Since 2001 more than 6,000 pupils have participated in the school programme. Each year the programme is thoroughly evaluated by means of separate questionnaires for pupils and for teachers, thereby identifying and introducing improvements in terms of organizational arrangements, content and support materials.



Graph 1: Evolution of the number of participants in the programme



The programme has had a significant and positive impact on Pamplona schools, and is repeated annually. The project, fully based on and integrated into the schools' curriculum, has enabled a high quality module for pupils concerning the issues of energy and the saving of energy to be inserted into the curriculum, which would not otherwise be available in Pamplona. This programme is provided by the local authority, is personalised and free, and is adapted to the linguistic diversity that exists within the schools.

Due to the success of the programme, we decided to make a test this year of this programme in secondary (15-16 years old). In this way, we choose two schools, and we are working with teachers and pupils. The main difference between primary and secondary programme, is the length of the sessions: in primary programme sessions are one and a half hours long and only one session per group and year, in secondary programme sessions are one hour long and each group has a session every month during the year (the total number of sessions are 9).

Lessons learned and repeatability

The principal innovation in this programme is the involvement not only of the pupils in the change to the energy model and the conservation of the environment, mitigating the effects of climate change, but also the involvement of their parents and all school staff. Another innovation has been the coordination with the existing schools' curricula and the delivery of the municipal programme on the schools' own premises.

The transfer of a programme of this type is simple, and is able to be used in different settings. The Municipal Energy Agency has provided information and offered documentation about the programme to different organisations.

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Printed reports or other literature available:

Title: "Discover energy and talk about it" . Teacher`s guide

Cost: 0

Title: "Discover energy and talk about it" . Pupils` guide

Cost: 0