Use of Renewable Energy in Huiliches Department (in Neuquen, Patagonia Argentina)

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This project was developed from an institutional program that looks to link curriculum content with specific problems of the community to which our school belongs. It is intended to transfer an simple, affordable and efficient technology that allows an improvement in the quality of life for the residents who receive it. The need of electric power for residents of Huiliches Department, who had an usable hydraulic resource in the vicinity of their housing, was raised as problem. It was proposed the development of a model of vertical axis Turgo turbine, with low cost, simple construction, easy maintenance and that had an acceptable performance. The objective was that the turbine would work with flows near the five liters per second with a jump height not exceeding forty meters. It was achieved to design, develop and build an equipment that operated successfully, yielding values of acceptable performance for the construction features of the turbine. Furthermore, for being an equipment that could be reproduced in our institution through students´ school practices, the cost is much lower than a similar machine on the market. This causes that the turbine becomes accessible and extremely useful for rural population of Huiliches Department, as well as to other towns in Patagonia Argentina with similar problems and conditions. Finally, the project achieved not only to give a possible and effective response to the need of the neighbors, but allowed students to deepen the theory and practical contents, while strengthening their commitment to school activities in its community.

Awards Won:

Second Award of $2,000