

# Diplôme de Compétence en Langue







## ANGLAIS

Session du vendredi 4 février 2011



# Dossier documentaire

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|  Document 2 | Information Pro-forma   |
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Document 1:



**Energy is green**

## Haiti



TOURNEZ LA PAGE S.V.P.

Document 2:



**Energy is green**

**Haiti project**

**Information Pro-forma**

*Community:* St Georges

*Nature of community:* seaside fishing village

*Location:* isolated, 78km from Port au Prince, poor road network

*Population:* under six hundred

*Geographical features:* some hills but generally flat; fast-flowing river nearby (la Petite-Anse) but the village is not built on the river bank


*Economic activity:* fishing, small-scale fish-freezing plant operating 08h30 to 12h30 during the week

*Household needs:*

- Domestic lighting and small electrical appliances to a daily maximum of 4kWh per household

*Community needs:*

- Street lighting - solar powered LEDs
- Electricity supply of 100 to 150kWh for fish-freezing plant

 Document 3:

## *Small Wind Turbines*



At just a metre tall, a small wind turbine costing about \$400 can generate 1.3 kWh per day, enough to meet the needs of an average family in third world countries.

Wind turbine placement is one of the key factors as to whether or not your project will be efficient. Wind turbines require a substantial wind speed to generate electricity efficiently. The faster the wind, the more output in watts you can generate. But wind speeds vary a great deal, depending on your surroundings. If you live in the countryside, and are surrounded by fields and open spaces, then the average wind speed may be more powerful than in a town.

Another factor to consider is the way the land around lies. If there are any large hills or mountains close by, then the placement of wind turbines may not be your best option.

Some people combine wind energy technologies with solar energy systems.

## Document 4:

### Striking a blow for wind power!

Wind power provides a fifth of Denmark's electricity, most of it generated by giant wind farms built on land and in the country's coastal waters.

But the tiny Danish island of Samsø is proving bigger isn't necessarily better by generating all its electricity using wind turbines of its own. Indeed, when it comes to small-scale renewable energy, Samsø -- population 4,000 -- is an example to the world. Among its energy-production facilities are 11 one-megawatt turbines on the island itself and 10 more turbines within three miles of its coast. The total investment was around 58 million dollars to produce about 26 million kWh per year.



"Small wind" is also being promoted, encouraging individual households to produce their own wind power using micro turbines, and, as well as using wind turbines to provide electricity, some islanders also have solar panels on their roofs.

Two of Samsø's turbines are owned by a co-operative of around 450 of the island's residents. They are the most important ones because they are the turbines that give the ordinary islander the opportunity of investing in energy supply.

**Document 5:****Electricity supply in Haiti**

The largely government-owned electricity sector in Haiti is facing a deep, permanent crisis characterized by dramatic shortages and the lowest coverage of electricity in the Western Hemisphere with only about 12.5% of the population (25% if illegal connections are accounted for) having regular access to electricity. Service quality in Haiti is very poor. Those who have access receive on average 10 hours of electricity a day, with very large disparities among the areas covered.

Most of the infrastructure for electricity generation in Haiti is very old and costly to maintain and operate. In 2006, total installed capacity was only 270 MW, of which about 70% was thermal and 30% hydroelectric.

**Demand**

Average annual per capita consumption in 2004 was just over 4kWh, the lowest in the western world. For comparison, electricity consumption in France in 2007 was 851kWh and in the United States in 2008, 1410 kWh.

**Renewable Energy Resources**

Besides hydroelectric generation, which accounts for about 30% of total installed capacity, no other renewable sources are being exploited for electricity generation in Haiti.

**Hydroelectricity**


A project for a new 30 MW hydroelectric plant has already been studied. This new plant would have 10 MW of guaranteed capacity and would cost about US\$120 million.

**Wind**

Haiti presents an interesting wind potential. Haiti's Wind Potential Atlas has revealed a potential capacity of 50 MW in the area of Lake Azueï (close to Port-au-Prince) alone.

**Solar**

Haiti also has an interesting solar potential. Although the available technology would not allow for large scale exploitation of this resource, rural electrification projects could apply off-grid solar technology.

 Document 6:



## Rivers' potential for electricity

**Rivers in Wales could play a key role in providing hydropower for thousands of homes, it has been claimed.**

However, environmental concerns mean not all the sites can be exploited. Tony Grayling, head of climate change and sustainable development at the Environment Agency said: "Some hydropower schemes have the potential to deliver low carbon electricity and improve the local environment for wildlife, for example by improving fish migration".

An example cited is the Osbaston weir scheme on the river Monnow in Monmouthshire.

The new fish pass has opened up around 200km (124 miles) of river to allow fish, including the Wye salmon, to enter and spawn in the Monnow again for the first time in 300 years.

The scheme is said to generate enough electricity to power 152 homes.

The Environment Agency said average set up costs ranged from \$150,000 to \$225,000 but only schemes that were well designed and had no negative impacts on the river wildlife or the local environment would get the go ahead.