

ESG on RENEWABLE ENERGY: What Can We Do? Part 2

In the last ESG newsletter, we explored why renewable energy is both ecologically and economically sound. Gibraltar has excellent natural resources both in wind power and in solar energy: It is vital that we start to think about implementing these technologies as part of a hybrid system to accompany our fuel combustion stations.

A wind power scheme in Gibraltar would involve setting up large turbines on one or more sites, in areas best suited geographically, aesthetically, economically and ecologically. An MoD pre-feasibility study carried out in 2005 considered potential sites for wind power schemes, and goes on to state that these schemes could well become commercially viable in the short-term “should grants and subsidies become available similar to those provided to wind projects in the UK under the Renewables Obligation”.

While Gibraltar’s geography and micro-climate is ideal for creating strong winds, the day-to-day changeability of local weather would require an extra careful demand-production balance. However, in a hybrid system not totally reliant on wind energy, the pressure on the wind power scheme would be reasonable. With the installation of large windmills in key sites, great care would have to be taken to avoid interfering with bird migration, or blemishing the landscape. Yet, the effort of carefully choosing and developing sites would well be worth it in the long term. The MoD’s pre-feasibility report suggested that one small wind power scheme at the Detached Mole alone would produce roughly 4 % of Gibraltar’s current yearly energy, with a capacity of 1.8 MW.

Finally, we come to solar energy: a relevant topic now that the summer is upon us! Solar energy is divided into two main forms of energy production technology: solar photo-voltaic and solar thermal. Solar photo-voltaic (PV) convert sunlight into electricity using semiconductors such as silicon. Solar power is a steadily growing section of the energy industry: its development has benefited from subsidies in states such as Germany, Japan, Spain and the US, and also from the involvement of some multi-national companies such as BP and Shell.

In Gibraltar, solar energy is an option we must consider. We receive 1500 kWh/m² in solar energy annually, and PV systems can be fed directly into the electricity grid (as part of a hybrid system). There are many areas on both sides of the Rock where solar panels could be fitted relatively unobtrusively – and not just for the generation of electricity, either. Solar thermal technology is not currently established as a means for production of electricity: it is used to heat water for domestic use. As such, it is cost-efficient for the property owner, and also decreases the burden upon the electricity system. In Spain, it is now obligatory for every new building to have solar panels installed. Wouldn’t it be great if a similarly bold policy were adopted locally?

Gibraltar must look at renewable energy on both a large and a small scale, as countries across the world are doing, both for ecological reasons and due to the impending fuel crisis. Sweden already relies greatly on renewable energy, which accounted for 26% of its total energy consumption in 2003 (far above the 6% EU average). Furthermore, the state plans to switch *entirely* to renewable energy within 15 years: an ambitious plan, but a huge step in the right direction. With the resources available to us here in Gibraltar, we must take steps towards a hybrid system comprised of both renewable energy and fossil fuels (for now!). In the meanwhile, think about installing a solar water heater – not just good for the environment, but for your wallet or purse!

