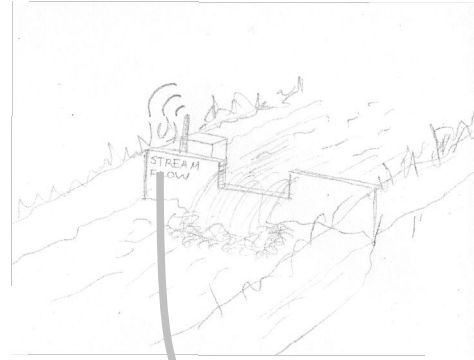
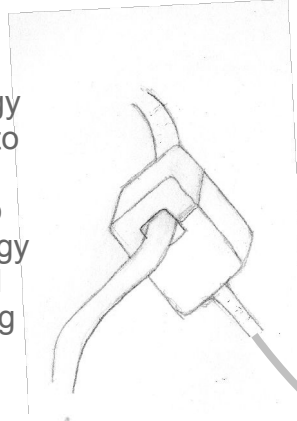


The Open Energy Monitor Project

This is a project to develop and build open source energy monitoring and analysis tools for energy efficiency and distributed renewable micro-generation.

Energy Use

Monitoring of mains electrical energy use in buildings. Makes it possible to monitor aspects of building performance and makes it easier to identify where improvements in energy efficiency can be implemented and then see the effects of implementing these improvements.

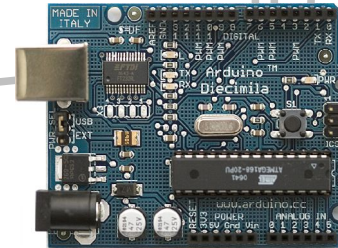
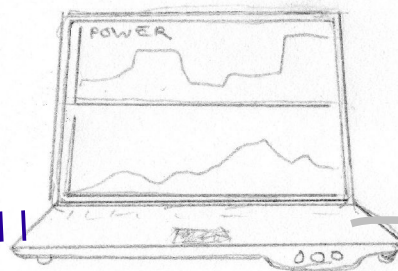


Energy Prediction

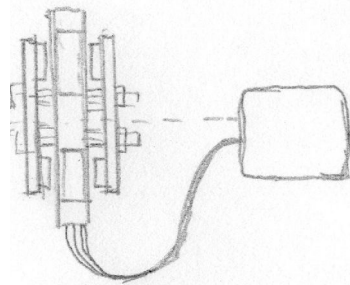
Before installing a renewable energy technology a feasibility study needs to be carried out of the site. In the case of a hydro system it is useful to have detailed stream flow data over a long time scale. This data can then be used for turbine and pipe sizing.

Data graphing, analysis and storage

Using free and open source software



Built upon the open-source Arduino micro-controller platform.



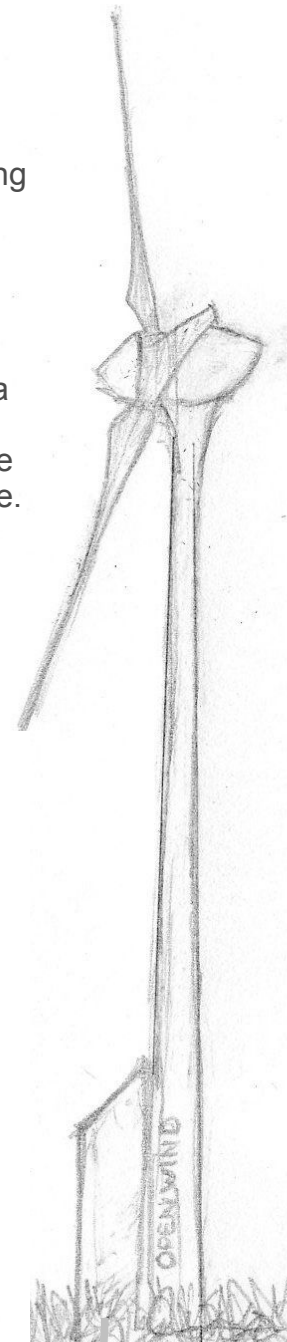
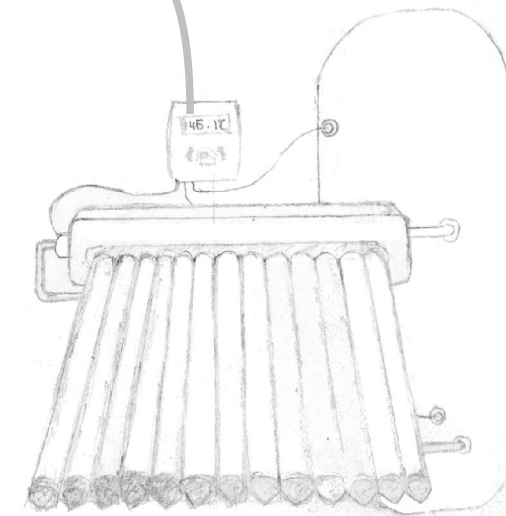
Energy technology development

When developing and building an alternator for a wind or hydro turbine it would be useful to be able to characterise its performance so that areas for improvement could be found.

Energy Capture

Monitoring of electrical energy production from on-site renewables such as wind, hydro or solar. Monitoring of heat energy captured by hot water solar.

The performance of a renewable energy systems are highly dependent on the quality of the site. Detailed data coupled with analysis software would enable performance comparison of the installed system with an ideal site case. You could know that your installed turbine or solar hot water system is working at say 80% of its potential.



Share data with the world

Post how much energy your capturing and using to the internet.

Open Source

This project is an open source project. Following the principles of the Free Software Movement the software source code and hardware designs are available at no cost to everyone under the GNU General Public Licence. This makes it possible to do more than just use the technology, you can learn how it works from the physics of AC and DC electricity to electronic circuit design and software programming. You can build it yourself and modify it to your needs. You can take part and benefit from a collaborative effort to develop and improve it. If it breaks you can learn how to repair it and when it comes to the end of its useful life it is easier to take apart so that different components and materials can be recycled in to new technologies.

To learn more visit

openenergymonitor.org