Abstract: Expanding bio-energy can help to fight climate change and improve energy security. The bio-energy industry in the EU is booming. Much of this success is based on the supportive EU directives and strategies that are stimulating investments and innovation processes. However, the bio-energy industry is being confronted with a number of interconnected challenges that threaten its reputation, legitimacy and long-term progress. These include:

- Debates in the popular media and political spheres on sensitive issues, such as the production of first generation biofuels and the impacts on biodiversity/rainforests and if such fuels can really contribute to significant reductions in greenhouse gas emissions. There are also questions being raised about second generation biofuels, food versus fuels, and large-scale plantations of energy crops.
- There remains a need for coherent and progressive policies across member states to continue to stimulate growth in the bio-energy industry. While the EU has a large number of supportive policies and measures for bio-energy, only a handful of member states are following this lead. Greater efforts by member states are required to meet EU targets and goals.

In a democracy, government and industry depend on informed citizens and consumers to drive truly responsible and significant solutions. But on the issue of bio-energy in the EU, most citizens and key stakeholders are not informed to demand and support effective actions. At the same it is difficult for the general public to recognize misleading information and ideological viewpoints. That’s why greater bio-literacy is critically needed to support the bio-energy industry.

Bio-literacy refers to improving the knowledge, understanding and legitimacy of bio-energy among the general public and key stakeholders (such as journalists in the popular media). This demands a communication strategy that goes beyond conventional approaches, such as leaflets, conferences, academic articles and basic websites. For example, the internet and the emergence of web 2.0 services offer extraordinary opportunities to communicate.

This paper utilizes experiences and observations from 2 major EU projects on how to overcome barriers and expand bio-energy. These projects have applied conventional approaches to communicate research results and information. However, the impact of these approaches is
questionable. The purpose of this paper is to critically evaluate and discuss 4 main questions. These include:

1. Who are the target audiences for a communication strategy on bio-energy?
2. What kinds of basic information and concepts are the foundations for the general public to understand bio-energy systems?
3. Which existing areas under debate in the media demand immediate attention, and what are the emerging 'hot' topics?
4. What communication channels can be utilised effectively, and how can web 2.0 services be integrated into a communication strategy to inform EU citizens about bio-energy?

**Keywords:** bio-energy, bio-literacy, legitimacy, innovation