WWF for a living planet®

WWF POSITION PAPER ON BIOENERGY

Background

To address climate change effectively and with the needed sense of urgency, a major switch from polluting to clean fuels is needed. Analysis indicates that despite an ambitious increasing in energy efficiency, a significant growth in renewable energy is needed to cut carbon dioxide (CO2) emissions substantially by up to 50% globally in the coming decades. This is necessary to stay below a 2 degree Celsius increase compared with pre-industrial global temperatures.

Modern and carbon-neutral biomass fuels[1] have the potential to become a key source of electricity and heat in the next twenty years. Compared to other intermittent renewable energies such as wind and solar, they offer the advantage that they can be stored and therefore used when needed. This increases the application of biomass fuels as a valuable alternative to replace coal in power plants. Research shows that there is an opportunity for OECD countries to generate up to 15% of their electricity requirements from sustainable biomass sources by 2020[2]. The potential global contribution of bioenergy in 2050 will be substantial with a input estimated at 50%[3].

Developing sustainable production and use of biomass is also key for many communities in developing countries. Many still rely on unsustainable use of firewood, dung and inefficient cookers generating large environmental and health problems. Whilst this position paper covers the global situation, the context and focus is particularly on industrialised countries and sectors and it should therefore be interpreted accordingly.

On the role of bioenergy WWF believes that:

- When creating an economic level-playing field, biomass fuels are cost-effective and easily accessible sources of energy to replace fossil fuels.
- Presently, preference should be given to the production of highly efficient combined heat and power production applications over dedicated electricity only and transport fuels.
- Stimulating bioenergy requires a cross-sectoral approach at government level, involving Ministries of Agriculture, Forestry, Environment, Trade & Industry, Transport, Finance.

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[1] This paper focuses on modern bioenergy uses, e.g. conversion of biomass in heat, electricity or transport fuels through an industrial process.
[2] Bauen et al, 2003, Biopower Switch: a blueprint for achieving 15% of electricity from biomass in OECD countries by 2020, Imperial College London and E4tech Consulting, available on www.panda.org/climate.
[3] UNDP, UN Department of Economic and Social Affairs, World Energy Council, 2000, World Energy Assessment.

- Governments have a key role to play in stimulating bioenergy demand through a package of measures including *inter alia:* preferential tariffs or quotas for biomass power, capital grants, public procurement, demonstration projects, building regulations and planning regulations.

On the planning process for the development of bioenergy schemes WWF believes that:

- Bioenergy can be developed without conflicting or indeed competing with agriculture and forest (timber, fibre, non timber forest products (NTFPs) production or nature conservation needs. National and regional governments should establish energy strategies that include local and regional planning guidelines to stimulate the development of biomass generation.
- The raw material sources will need to be determined at a regional / landscape / catchment level. These will include existing forest resources, dedicated forests, short rotation coppice, dedicated agricultural crops, and residues from existing forest and agricultural operations.

On a bioenergy scheme consideration of environmental issues WWF believes that:

- Site specific best methods of production need to be further developed for all raw material sources, backed up by methodologies ensuring effective implementation and monitoring.
- There should be no conversion of natural forest or High Conservation Value (HCV) habitats for energy production. HCVs should be maintained or enhanced. Production of biomass fuels should not result in net negative impacts on habitats and biodiversity.

WWF will:

- Promote bioenergy as a viable alternative and environmentally sound source of energy to consumers.
- Work with biomass industry and the power sector to promote biomass as a replacement for unsustainable energy production and use.
- Work with agriculture and forestry sectors to promote sustainable supplies of biomass.
- Work with national governments, and intergovernmental organisations and other NGOs to develop biomass strategies and incentives to stimulate biomass supply in power generation.
- Develop guidelines for good practice for raw material supplies.
- Advocate the development of best practice standards for integrated pollution prevention and control for power generation plants.