

Argentina, bio-diesel and the CDM

After long and difficult negotiations in 2001, the Clean Development Mechanism (CDM) seems set to bring sustainable energy finance to non-Annex I countries. **Sebastian Sala** and **Fabian Gaioli** review the potential of bio-diesel CDM projects in Argentina

Bio-diesel is a cleaner-burning, non-toxic and biodegradable fuel made from natural and renewable sources such as new and used vegetable oils. Like petroleum diesel, blends of up to 20% bio-diesel (known as B20) can be used in nearly all diesel-cycle engines and are compatible with most storage and distribution systems. These low-level blends (20% and less) do not require any engine modification. Higher blends, even pure bio-diesel (100% bio-diesel, or B100), can be used with little, if any, modification.

The use of bio-diesel in a conventional diesel engine substantially reduces emissions of local and health-damaging pollutants. The higher the percentage of bio-diesel blended into the fuel, the greater the reduction in emissions. This is important, because it means bio-diesel can be considered as an additive to standard diesel which can help oil companies, refineries and automotive plants to achieve fuel qualities and emission levels compatible with national regulations.

In Argentina, bio-diesel will be used first in rural areas, allowing producers to minimise the impact of international variations in oil prices and thus helping to improve the financial situation of this sector of the economy. Bio-diesel production can also help create employment, strengthen agricultural development in a sustainable way and simul-

taneously reduce diesel imports, while helping to slow the run-down of Argentina's limited oil and gas reserves.

Bio-diesel should therefore be regarded as a viable alternative to be developed in Argentina as a national priority.

Another attraction is the carbon cycle related to bio-diesel fuel substitution. The burning of petroleum diesel releases carbon dioxide (CO₂) to the atmosphere and depletes limited fossil fuel reservoirs. CO₂ released by bio-diesel, on the other hand, is continuously recycled from crop to crop. For this reason, the use of bio-diesel could slow the build-up of CO₂ in the atmosphere.

“Institutional support for bio-diesel and the CDM is already in place”

It has been shown that burning 1 ton of petroleum diesel releases 3.11 tons of CO₂ and burning 1 ton of bio-diesel releases almost the same amount. But, because the bio-diesel process recycles CO₂, the replacement of standard diesel by bio-diesel would reduce net CO₂ emissions by approximately a factor of three. A bio-diesel plant producing 50,000 tons of fuel each year would therefore help to prevent around 150,000 tons of CO₂ emissions.

The Clean Development Mechanism now provides investors with the opportunity to obtain certified emission reductions by funding projects which use bio-diesel instead of diesel and therefore reduce CO₂ emissions.

The generation of ‘carbon credits’ (certified emission reductions) from bio-diesel projects in Argentina could help satisfy some

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of the international demand for credits from those countries that need them to comply with their emission reduction targets under the Kyoto Protocol.

As Argentina is one of the world's biggest producers and exporters of oilseeds, such as soybean and sunflower, it has enormous potential for bio-diesel production. The country could emerge as one of the first nations “reaping fuel” at the same time as it contributes to limiting global warming.

Unfortunately, the country's current socio-economic crisis is hindering investment decisions and is the main barrier to be overcome. But the CDM can offer a triggering incentive to encourage producers and investors to develop project activities compatible with additionality requirements.

Institutional support for bio-diesel and the CDM is already in place. In 1998, the Argentine Office of the Clean Development Mechanism (OAMDML) was created, under the Secretariat of Sustainable Development and Environmental Policy, to support climate change issues. The OAMDML is the appointed authority to evaluate all CDM projects at the national level. The same Secretariat is also co-ordinating the Biofuels National Program, which aims to promote the production and use of biofuels.

The Congress and other national authorities have been promoting bio-diesel since mid-2001, offering fiscal benefits to speed up the process of investment. This incentive policy will support several pilot projects to turn bio-diesel into a mass-consumption fuel.

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