

CONSIDERATIONS IN THE FINANCING OF BIOFUEL PROJECTS

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Dr. Nick Pitsas
KLC Law Firm



DRIVERS FOR BIOFUELS

- Reduce the energy supply risk and make the economy more competitive and less dependent on oil imports
 - high and volatile oil (and gas) prices and fears of depletion
 - relatively few and in some cases far-distant and unstable and/or unreliable oil and gas producers
 - fossil fuel is often an expensive energy source in rural areas
- International and Regional Agreements on Climate Change
 - UNFCCC, Kyoto Protocol
 - EU ETS, Asia Pacific Partnership on Clean Development and Climate
- Increased concern of the public and of governments on environmental matters
 - Global warming
 - Sustainable development
- New Business Opportunities for the Agricultural Sector
 - generation of cash income for farmers through relatively high and stable crop prices
 - benefits with regard to local employment and local energy supplies
 - more financially sustainable local communities

PARTIES INVOLVED IN FINANCING

- Sponsors

Equity investors

- State-owned company, agency or department

Equity Participation

PPPs

Offtakes from State companies (i.e. transport companies)

- International Lending Agencies (i.e. World Bank, EBRD, UNCTAD, IMF, ADB)

Provide know-how, expertise and technical and financial assistance (e.g. in the form of co-financing, equity, quasi-equity or soft credit facilities)

More amenable to participate in the financing of small innovative projects

- International Investment Banks

They are much more interested in large-scale projects

Provide lending facilities to reliable partners and check thoroughly the project's economics

PARTIES INVOLVED IN FINANCING

continued

- Domestic (and regional) Commercial Banks

Cautious in financing small projects

Normally charge higher interest rates than international banks

- International Markets

Private Equity/Venture Capital Funds, Hedge Funds, Mutual funds

Strict Due Diligence on the financial aspects of the project (invest on a short-term basis in projects which will minimize risks and maximize profits)

- Foreign and Bilateral Agencies and Institutions

Export Credit Agencies

- NGOs and Private Charity Funds

For micro-projects in developing countries which have a well-spirited thematic aim (e.g. rural development, improvement of living conditions of poor rural population)

CONDUCT OF FEASIBILITY STUDY

■ Economic Aspects (Cost analysis - Bankability)

End-product (biodiesel, ethanol, biogas, electricity, stationery engines for shaft power)

Applications (transport, electrification)

Market Demand

Target Customers (village, city, municipal or government department, sale on private customers and/or the open market)

Land location and availability

Feedstock Supply (individual local farmers or co-operatives, large estates, domestic or international agro-business companies)

■ Technical Aspects

Plant Specifications

Technology used

Production methods

CONDUCT OF FEASIBILITY STUDY

continued

■ Environmental Aspects

Conduct of EIA

Evaluation of the Effects on Environment

Agronomic Sustainability (Variety of crop sources, evaluation of production methods, soil and climate conditions)

■ Legal Aspects

Regulatory Framework in Force

Energy and Investment Regime

Government Subsidies and Incentive Schemes to the sponsors (tax breaks on nationally produced biofuels, compulsory minimum use of biofuels in the total national energy mix, existence of carbon savings legislation and policies to promote agro-processing industries, commitments to phase out the use of fossil fuels)

Government Subsidies and Incentive Schemes to crop farmers (e.g. target loans for seeds, fertilizers and nutrient inputs, provision of training for more productive and sustainable methods)

FORMULATION OF BUSINESS PLAN

■ Optimal Financial Model for the specific project

Important in biofuel projects because conventional market pricing models do not reflect the costs of Co2 emissions and other environmental externalities

- Detailed Feedstock Supply costs (i.e. per ton production costs) and Long-term Availability of Supply
- Detailed cost estimate of the plant facilities
- Production Output and Stability of Production Projections
- Timeframe of production (commencement, capacity and volumes)
- Off-take Projections
- Amounts and Valuation of by-products and their Potential Use
- Impact of CDMs and JI Programmes to yield additional income

This is important in biofuel projects because they have high upfront capital costs and relatively low operational costs. At the outset, there is often a large funding gap between the capital banks are willing to lend owing to the high risk of such a project and the limited amounts of equity sponsors are willing to contribute. However,

- CDM and JIPs are very complex in their application and there are problems regarding their ownership rights
- High costs: €50.000 to €300.000 to have CDMs certified with large projects (more than 10.000 hectares)
- Questionable whether they can be used in the near future

Initial fixed costs (e.g. feasibility study and business plan costs) can be quite high for small-scale projects

FINANCE MODELS FOR SECURING FEEDSTOCK PRODUCTION – Part 1

Purchase Agreement

The sponsor buys on a long-term basis the feedstock production, usually at the market price.

Buy-Back Agreement at fixed price

Initial in kind contributions: Farmers contribute land and labour and the Sponsor contributes seeds, initial fertilizer and technical assistance. Upon completion of the plant, the farmers sell the feedstock production to the SPV at fixed prices and the press cake could be returned to the farmers

Plus

Simple method, no money flows at the outset, could be attractive to subsistence farmers who are often adverse to loans
Useful when the producers are farmers with small landholdings
No substantial risks for farmers as payment is at a fixed price for any quantity produced

Cons

The Sponsor shoulders the risks
Compensation for the work of the farmers until the completion of the plant is subject to negotiation
Farmers may not be well aware with the market price of the produce
the sole purchaser of the crop)



FINANCE MODELS FOR SECURING FEEDSTOCK PRODUCTION – Part 2

Joint Venture

Making of a contractual agreement between the Sponsors and the farmers under which all contributions made by the parties are pooled together and the “fruits” of the overall investment are distributed among them pro rata

Plus

Fair sharing of risks and rewards

Cons

Difficulties in the valuation of respective contributions and in administering the project

Farmers are not compensated until the plantation becomes productive and the plant facilities are in operation

More intensive in-field follow-up may be needed to prevent farmers from reporting a smaller harvest than they actually have (although this risk is minimized if the sponsor is the sole purchaser of the crop)

FINANCE MODELS FOR SECURING FEEDSTOCK PRODUCTION – Part 3

Loans

The Sponsor issues loans to the farmers, which are usually limited to inputs (seeds and fertilizers) and the farmers contribute their land and labour. There is no fixed-buy back rate for the seeds and the farmers are paid the market price for their produce. Also, a grace period can be considered until the plant commences its operations (or the fields become productive)

Plus

More price transparency

No need for intensive monitor of the crop fields

Transitional consumptive loans may be given for the initial stages of the project

The Sponsors' financial risk is reduced

Cons

The costs of loan administration and the risk of bad harvest are borne by the farmers, which could substantially reduce their yield

The loan system is not very attractive to subsistence farmers

FINANCING OPTIONS

- Equity
- Debt
- Corporate/On-Balance Sheet
- Project Finance (Off-balance sheet)

Non-Recourse: Principal and interest are repaid using the cashflow generated by the project, rather than the general assets or creditworthiness of the Sponsors and is typically secured by all of the project assets, especially the off-take contracts

Limited Recourse: Lender's security is confined to the project assets, but a surety from the Sponsors provides guarantees

- Private Placements

Direct private offering bonds, notes etc collateralized by the cash flows from the project (off-take contracts) to a limited number of sophisticated investors, who normally hold them up to their maturity date.

- Securisation/Use of Derivative Instruments

Pooling and repackaging of cash-flow producing financial assets (off-take contracts) into securities that are then sold to investors.



FINANCIAL STRUCTURE

- Depends on the financial parameters of the project
- Usually, a Special Purpose Vehicle (SPV) is set up by the Sponsors, whose sole assets are those of the project. Sponsors make capital contribution, and lenders make loans, to the SPV
- Main Issue: Risk identification and allocation

RISKS – Part 1

Financial Risk

- Minimum D/E ratio (normally in the region of 50/50 to 60/40)
- Repayment schedule and interest rate (debt with a minimum tenor of 7-10 years and spread in the 2.5%-4% range)
- Cash flow projections and IRR (typically 10%-15%)
- Supply and Offtake contracts for loan duration or at least a minimum of five years and there must be a minimum purchase price (little negotiating power vis-à-vis main purchasers of biofuel production in the open market)
- Currency depreciation (loans are paid in foreign currency while off-takes are in local currency)

RISKS – Part 2

Commodity risk

- Long-term agreements with farmers in place
- Reliable contingency scenaria (i.e. in the event of crop failure)

Technical and technology risk

- Relevant technology is emerging and not widely tested or proven
- Companies specialised in equipment manufacturing are often undercapitalised and with a limited track record (e.g. risk in securing spare parts)

Legal risk

- Due Diligence
- Structure and working of the deal

Assignment of cash flow from the off-take contracts to the banks, (including the construction contracts for the plant), use of restrictive covenants, controls on the issuance of dividends, setting-up of a separate debt service reserve account



RISKS – Part 3

Performance and Completion risk

- Performance and construction guarantees and other sponsor support (including insurance)
- Commitment of Sponsors to provide extra funds in the event of cost overruns
- Performance risk is pretty high given the dependency on weather conditions

Political risk

- Potential for withdrawal of existing subsidies and breaks
- Potential for renegotiating Offtakes already in force with State-owned enterprises
- Potential for outright or creeping expropriation

**Thank You Very Much
For Your Attention!**

