

Renewable Energy Finance in Practice Vienna, 2011

GLC Global Leading Conference

Structuring & Analyzing RE Projects to Optimize Financing and Investor Attractiveness

Bauhaus Capital Partners

Renewable energies, cleantech and infrastructure
Investment and Business development advisory services



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RISK - RETURN

- 1. The importance of knowing your Mission and Project lifeline**
- 2. What investors and banks really look for in a project**
- 3. The forgotten factors**
- 4. Contract structuring, documentation and risk sharing**
- 5. Risk assessment and mitigation in renewable energy projects**
- 6. Structuring, financial analysis, modeling and optimization**
- 7. Incentives unique to financing renewable projects**
- 8. Case study**



1. The importance of knowing your Project lifeline

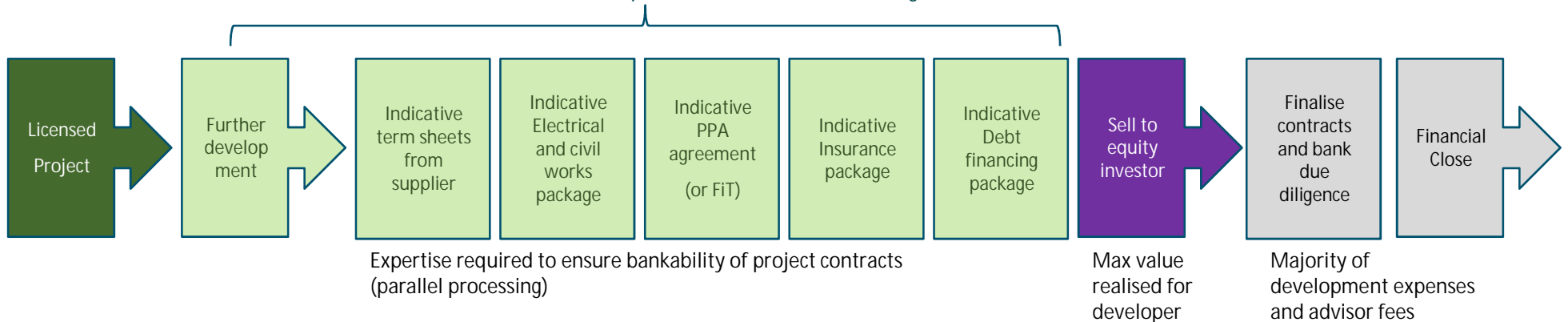
Match the project to the investor

- Fact: a project's value increases exponentially with further development. Therefore, a project developer's strategy should be to develop a project as far as possible within possible expertise and budget constraints

Maximum value creation phase:

Activities will significantly decrease project risk at minimum costs

- Project feasibility and business case can be developed/tested in much more detail
- Most costs associated with development are related to finalising contracts and bank DD



- By selling a project with a license only, a developer is “leaving money on the table” and should only be considered as a last resort (e.g. in case of no budget)
- With its extensive experience and expertise an Advisor can assist you to maximize the value of your project
 - leading project developers through the negotiations with potential suppliers (including many vendor finance solutions)



Coordinate (partial) sale to equity partner

2. What investors and banks really look for in a project

Investor

Due Diligence Assessment Model: *Scorecard*

[Date]

Rating summary

Financial performance	9
Brand value	4
Business condition	2
Prospects for the future	1
Customers	4
Competitive environment	4
Human capital	3
Quality of assets	3
Structure of purchase transaction	5
Other risks	4
Total	39



2. What investors and banks really look for in a project

Document list	<i>Reviewed</i>	<i>Date reviewed</i>	<i>Notes</i>
Financial documentation			
Current annual business plan	Yes	06/16/04	Formal business plan exists; includes financials, strategic direction, and resource requirements for year
5 years of audited financial statements			
3 years of federal and state tax returns			
6 months of bank account history			



2. What investors and banks really look for in a project

Document list	Reviewed	Date reviewed	Notes
Insurance policies			
Liability			
Workers' compensation			
Life insurance on key personnel			
Health coverage			
Documentation of recent claims			
Other			
Legal documentation			
Articles of incorporation			
Amendments to articles			
Bylaws			
Office leases			
Other facilities leases			
Equipment leases			



2. What investors and banks really look for in a project

Document list	Reviewed	Date reviewed	Notes
Intellectual property			
Patents			
Trademarks			
Copyrights			
Trade secrets			
Strategic agreements			
Agreements with suppliers and vendors			
Selling agreements			
Special customer agreements			



2. What investors and banks really look for in a project

Document list	<i>Reviewed</i>	<i>Date reviewed</i>	<i>Notes</i>
Legal documentation			
Workers' compensation			
Life insurance on key personnel			
Health coverage			
Documentation of recent claims			
Other			
Legal documentation			
Utility agreement			
Permits, authorizations and right of ways			
Municipal, state permits			
Performance bonds			
Land leases			
Equipment leases			



3. The forgotten factors

- Match you project to your investors
 - Pipelines
 - Exit Strategies
 - Regulatory changes
 - Political, religious and economic risks
 - Country and currency risk
 - Repatriation of profit structure
 - Applicable law (risks and costs)
 - Technology risks
- Project evaluation and project management
 - In depth business case assessment
 - Bankability and contracting structure analysis
 - Detailed financial modelling
 - Financing strategy (debt and equity)
 - Timetable and planning to Financial Close
 - Project contract negotiations
 - Commercial terms, e.g. warranties, availability levels, etc.
 - Manage interrelation to financing package
 - Debt and equity raising and local/cross border tax structuring
 - Preparation of all necessary support materials (information memo, financial models, management presentations, etc.)
 - Marketing the project to a selection of potential debt and equity partners (investors)
 - Risk Analysis models and mitigation
 - Commercial negotiations with banks
 - Commercial negotiations with equity providers
 - Financing documentation



3. The forgotten factors

Debt in the capital structure	0%	10%	20%	30%	40%	50%
EBIT	120.000	120.000	120.000	120.000	120.000	120.000
Interest	-	<u>4.125</u>	<u>8.750</u>	<u>14.625</u>	<u>22.000</u>	<u>31.250</u>
Profit before taxes	120.000	115.875	111.250	105.375	98.000	88.750
Taxes	-	-	-	-	-	-
Profit after taxes	120.000	115.875	111.250	105.375	98.000	88.750
Dividends	120.000	115.875	111.250	105.375	98.000	88.750
Total payments to security holders	120.000	120.000	120.000	120.000	120.000	120.000
Required return on debt	8,00%	8,25%	8,75%	9,75%	11,00%	12,50%
Required return on equity	12,00%	12,50%	13,00%	13,50%	14,50%	16,00%
Market value of debt	-	50.000	100.000	150.000	200.000	250.000
Market value of equity	<u>1.000.000</u>	<u>927.000</u>	<u>855.769</u>	<u>780.556</u>	<u>675.862</u>	<u>554.688</u>
Market value of the firm	1.000.000	977.000	955.769	930.556	875.862	804.688
Book value of debt	-	50.000	100.000	150.000	200.000	250.000
Book value of equity	<u>500.000</u>	<u>450.000</u>	<u>400.000</u>	<u>350.000</u>	<u>300.000</u>	<u>250.000</u>
Book value of the firm	500.000	500.000	500.000	500.000	500.000	500.000
Return on total capital	24,0%	24,0%	24,0%	24,0%	24,0%	24,0%
Return on equity	24,0%	25,8%	27,8%	30,1%	32,7%	35,5%
Number of shares outstanding	5.000	4.744	4.477	4.194	3.858	3.447
Price per share	200,0	195,4	191,2	186,1	175,2	160,9
Earnings per share	24,00	24,43	24,85	25,13	25,40	25,75
Price-earnings ratio	8,33	8,00	7,69	7,41	6,90	6,25
Book value debt ratio	0,0%	10,0%	20,0%	30,0%	40,0%	50,0%
Market value debt ratio	0,0%	5,1%	10,5%	16,1%	22,8%	31,1%
Weighted average cost of capital	12,0%	12,3%	12,6%	12,9%	13,7%	14,9%
Free cash flow	120.000	120.000	120.000	120.000	120.000	120.000
Market value of the firm	1.000.000	977.000	955.769	930.556	875.862	804.688



4. Contract structuring, documentation and risk sharing

Properly structured and negotiated contracts with the right parties can heavily affect risk and return parameters

EPC Contracts

1. Chose the right EPC
2. Have the right type of contract
3. Fully and exactly define the scope of work
4. Terms of payment and cash flow
5. The schedule
6. Assurance and performance guaranties and bonds
7. Insurance
8. Changes
9. Disputes and resolutions
10. Damages
11. Termination and suspension
12. Force Majeure



Off take Contracts

CDM Contracts

Supply Contracts

Common characteristics

- Long term conditions
- Not based on spot market trades
- Bankable partners, will be around for some time
- Land is secured
- In compliance with local regulations
- Cross border contracts fully secured
- Currency hedging

5. Contract structuring, documentation and risk sharing

Risk transferring strategies

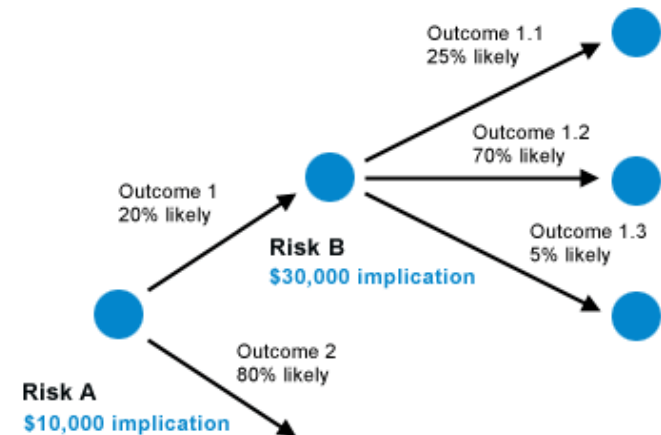
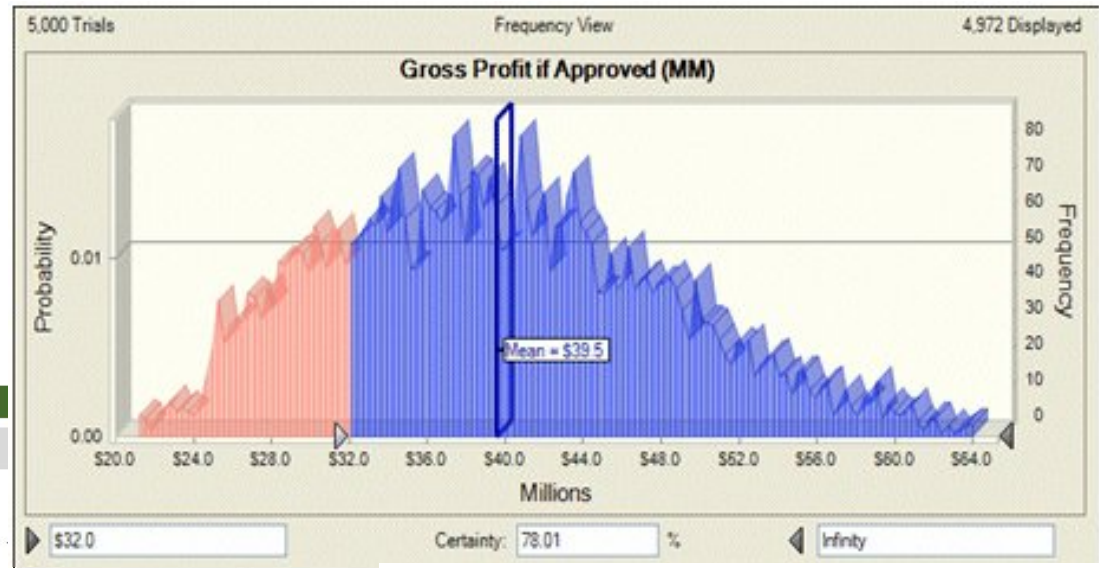
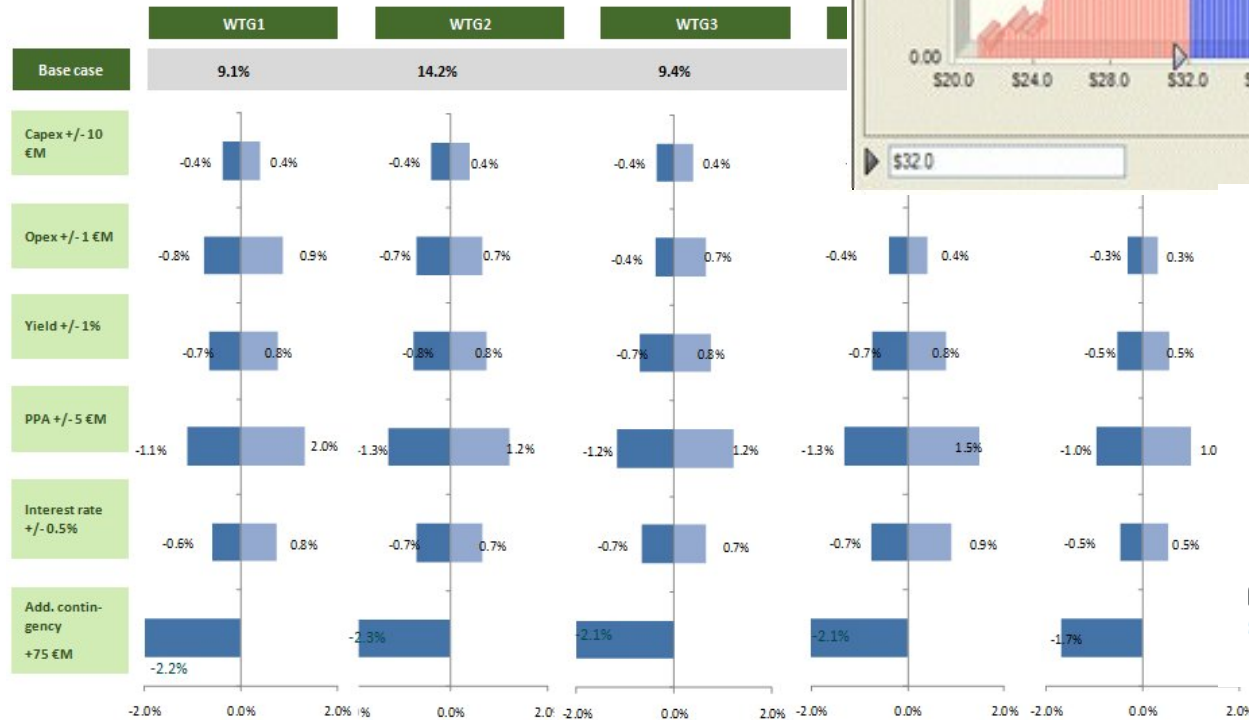
1. There is no standard Terms and Conditions
2. Be very careful of the indemnity clause
3. Don't provide Additional Insured Status
4. Risk transfer clauses
 1. Insurance
 2. Safety
 3. Performance
 4. Supply
 5. Negligence



6. Structuring, financial analysis, modeling and optimization

Project optimization tools and methods

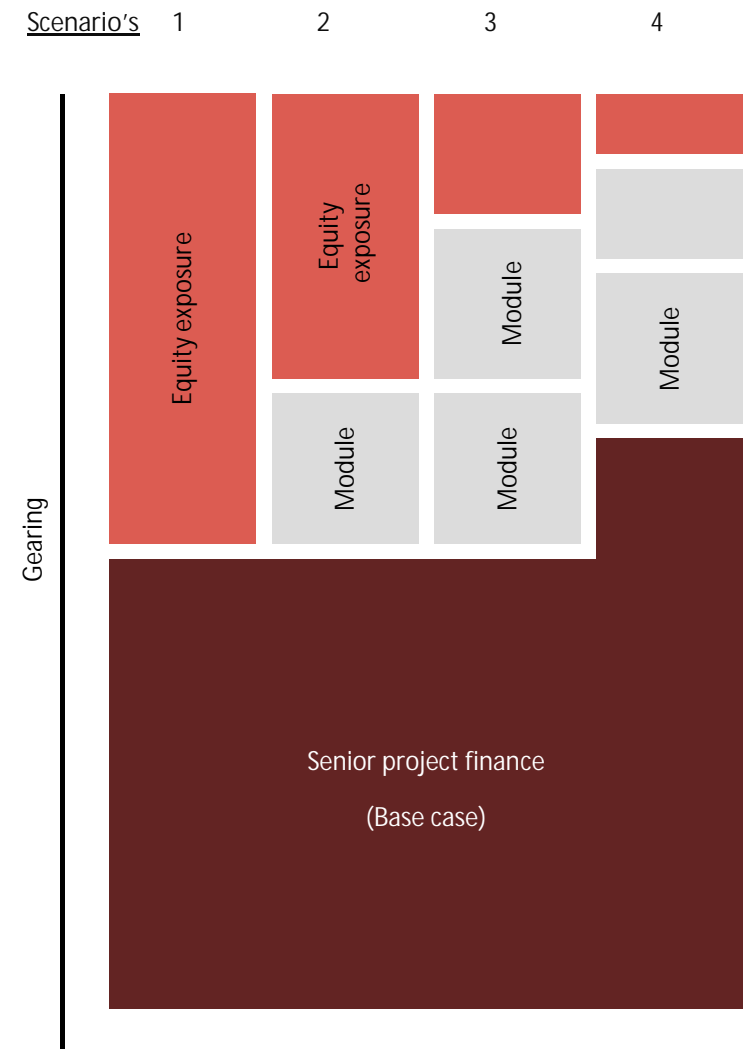
Example: extensive analysis of WTG selection impact



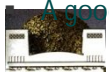
6. Structuring, financial analysis, modeling and optimization

- Advanced, modular approach to project financing strategy
- Having a strong strategy in place adds significant value to a potential investor
 - Financial leverage is the most important driver of returns for the investor
 - Supported by indicative term sheets to prove bankability to investor
 - Verify key financing assumptions
- A key alternative in financing modules is “vendor finance”
 - Subordinated debt or equity support from the EPC supplier to facilitate the realisation of the project
- Potential vendor finance modules include:
 - Replacing pre-completion revenues by a fixed amount
 - Optimization of payment terms (timing) for capex and opex to maximize debt capacity of project
 - Move costs between Opex to Capex to maximize debt capacity of project
 - Increasing warranty levels or warranty security
 - Conditional discounts (e.g. subject to performance)
 - Junior debt (subordinated) or equity participation by the EPC/Technology supplier in the project
- Vendor finance can substantially (i) decrease the equity requirement and (ii) increase investor IRRs (depending on the costs). Key is to integrate Vendor Finance options in the total financing package to avoid problems negotiation

Example: advanced project financing Strategy



A good Advisor has extensive experience in and structuring vendor finance options



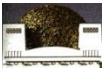
7. Incentives unique to financing renewable projects

- Green Certificates (CDMs)
- Feed in Tariffs
- Local development bank loans
 - Low cost of capital
 - Cadence periods
- Regulated off taker
- Tax credits
 - Investment
 - Production
- Tax incentives
 - Direct breaks on sales tax
 - Freedom in depreciation periods and amounts
- Employment creation incentives
- R&D incentives



8. Case study - WTE

Large WTE plant in South America



8. Case study - WTE

Profile of the project (Project Profile) The project is laid out to fulfill two objectives:

- To provide Panama with working full size ACME plants working on an industrial level on the conversion of bio mass and waste to synthetic fuel
- To provide WTE Inc. with a full size working plant to train engineers and operation personal and to run investigation on certain tropical feedstock such as MSW, sugar cane, canal grass or algae.

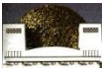
On a lot of land of approximately 654 hectares in central Panama a WTE/Biomass to Fuel plant shall be erected being composed of:

- Landfill on site
- a full size bamboo plantation
- a bio mass preparation plant
- a ACME XYZ technology organics to fuel conversation turbine
- a power generation unit
- office, accommodation and training-centre



8. Case study - WTE

- This is the example for a ACME XYZ , producing
- 5,000 liters diesel per hour
- including a power generating module
- with a power price of € 0,07 per KWh
- Diesel price set at € 0,60 per liter.



8. Case study - WTE

Parameter	Initial conditions	Restructured conditions
Capex	€47.200.000	€44.840.000
Debt/Equity ratio	70/30	85/15
WACC	12.0%	9.50%
Senior Loan term	12 years	15 years
Loan interest	9.5%	8.0%
IRR (Project)	14.50%	24.5%
ROI	10 years	7 years
Development risk	High	Acceptable
Construction risk	Medium	Low
O&M risk/cost	Medium/12%	Low/9.7%
Technology risk	High	Acceptable



8. Case study - WTE

Thank you

