

TEASER MEMORANDUM

HC SOLAR SAS

April 2009

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1. **Company Information**

HC SOLAR’s mission is to be a promoter of alternative energy by generating and owning Building Integrated Photovoltaic (BIPV) energy production installations. Starting with the evaluation of the potential and the shaping of appropriate business and financial models, HC SOLAR manages all processes, integrates all implementation phases and operates as an energy producer.

The vertical integration of installation companies is a short-term strategic orientation for HC SOLAR to add value and gain competitive advantage for the future. First contacts under NDA (non disclosure agreement) with installers have been organized.

HC SOLAR’s legal structure is in the form of an SAS (Société Anonyme Simplifiée) as contacts have already been initiated in the French market. A separate entity has been also created in the Netherlands under the name HC SOLAR Consulting [KvK. 27334860] to support all consultancy and preparation work before and after the launch of HC SOLAR SAS in France.

2. **Investment summary**

a. **Equity investment**

HC SOLAR SAS is seeking equity investment partners for its project. Investors & real estate owners who opt for this scheme will become equity shareholders of the company with ‘preferred shares’ to secure priority dividend distribution. Voting rights would thus be limited, the founders retaining the majority of decision rights.

The level of proposed Equity participation is 1.2M€ in 2009 with 3M€ to 6M€ for each following year depending on business development opportunities.

Capital Requirements (M€) 2009		Additional Requirements			
		2010	2011	2012	2013
Investment into Production Installation	2.6	8	15	23	23
Start up costs	0.4				
Total Capital Requirements (M€)	3.0	8	15	23	23

Capitalization (M€) 2009					
		2010	2011	2012	2013
Founders	0.1	0.4	0.4	0.5	0.5
Shareholder's equity (RE Owners)	0.1	0.2	0.3	0.5	0.5
Shareholder's equity (Inv. Funds)	1.2	2.6	5.0	6.0	6.0
indebtedness to Banks	1.6	4.8	9.3	16.0	16.0

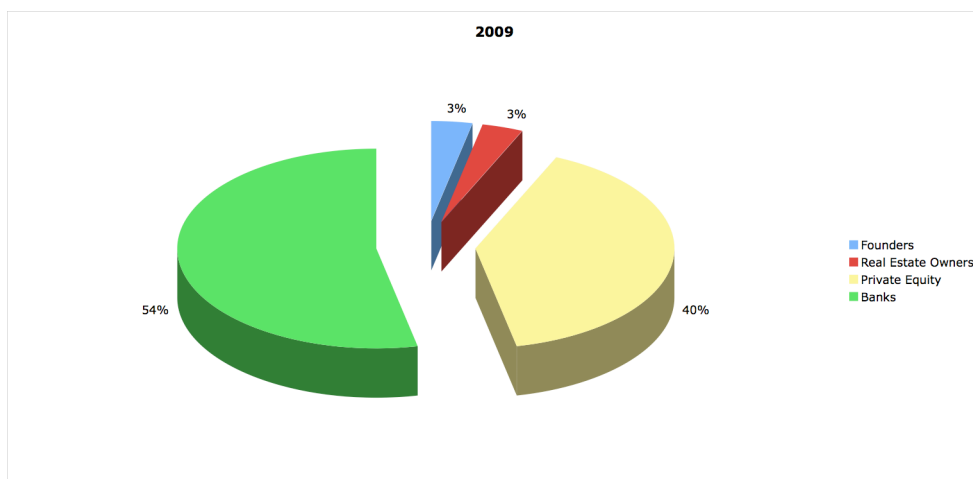
b. **IRR / Equity**

The IRR is calculated over 20 Years with an indebtedness level varying from 40% to 60% based on a loan interest rate of 5%. The assets have been amortized over 10 years to give an acceptable level of liquidity thus securing dividend distribution to shareholders.

- i. Shareholders IRR* = **16% based on 40% gearing**
- ii. Shareholders IRR* = **18% based on 50% gearing**
- iii. Shareholders IRR* = **20% based on 60% gearing**

*based upon: Net Income after tax + depreciation - Debt reimbursement (15Years)

c. **Capital Distribution 2009**



3. **Market information**

Although France has had a feed-in tariff in place since summer 2006, the PV sector has lagged behind its southern and eastern neighbours, Spain and Germany. New regulations and clear targets set at the “Grenelle de l’Environnement” have created a positive trend for owners of private homes and commercial & industrial real estate to invest in BIPV.

a. **French Market positive regulation**

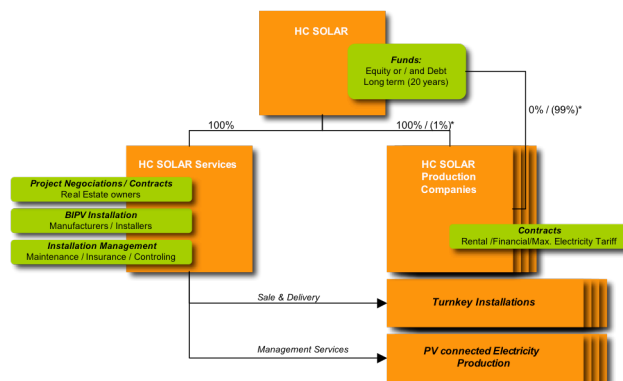
The basic feed-in tariff of €0.30/ KWh is relatively low, but there are exceptions. Building Integrated Photovoltaic (BIPV) installations can receive a €0.30/ KWh premium, making the economics look much more promising at €0.60/ KWh until end-2010 (followed by a rate of 0.45€/KWh that is to be confirmed). With BIPV, the Photovoltaic product installed is required to meet certain properties be they mechanical resistance, protection or thermal regulation, physical protection of materials and people or particular design elements. HC SOLAR will at first focus on flexible sealing membrane whilst further BIPV certified materials are developed. EDF and all private electricity distributors have an obligation to purchase the energy produced over a 20-year period with a maximum of 1500Kwh/Kwp. The complexity of the authorisation process makes a partnership with EDF or any distributor particularly relevant.

b. **Lack of competition leaves space for BIPV Integrated Business Solutions**

There are no ‘Solar Business Integrators’ offering a BIPV global solution (incl. production) for commercial and industrial real estate in France. The biggest players, *EDF Energies Renouvelables* and *GDF Suez* are largely focused on private homes (incentive measures with tax credit and loan at 0%) and have the sales teams oriented towards that target group. Some German developers and *SunEdison* look to establish themselves in France but lack the knowledge and experience of the French market. Small developers are distributors of BIPV brands (i.e. *Urbasolar*) mainly located in the south part of France. Companies capable of bringing together financial institutions, real estate funds and private equity investors to finance, own and manage a BIPV production project have yet to emerge and are definitely not present in the northern part of France. Installers are opening up to the development business. The positioning of HC SOLAR as “Solar Business Integrator” with the vertical integration of installers in the northern part of France (above Lyon-Bordeaux Line with an insulation approx. +/- 1000KWh/Y) can therefore be seen as a blue ocean strategy as competition in the sector is not fierce at this stage.

4. **Business idea**

a. **Business Model**



HC SOLAR will make use of various certified BIPV materials for construction or refurbishing of commercial and industrial real estate: roof sealing, curtain walls, wall cladding, windows, glass roofs, sun shadings. HC SOLAR Services is the developer and integrator of all implementation phases in order to deliver to HC SOLAR Production turnkey installations and all adequate services to yield the energy production (management, maintenance, insurance).

HC SOLAR SAS is the holding, which raises funds to finance the building of BIPV installations and creates each Project company (HC SOLAR Production) that will produce energy. HC SOLAR SAS consolidates the financial results of all activities within the group.

b. Product & Services portfolio

Three products have been designed:

- **A - HC Solar Investment:** HC SOLAR SAS delivers and runs turnkey installations through its subsidiaries HC SOLAR Services and HC SOLAR Production. HC SOLAR SAS thus acts as Managing Director of the Production Company. HC SOLAR takes over the global investment and finances 100% of the turnkey installation.
- **B - HC Solar Shared Investment:** HC SOLAR SAS delivers and runs turn key installations through its subsidiaries HC SOLAR Services and HC SOLAR Production. HC SOLAR SAS integrates the real estate owner as an equity shareholder and takes over the global investment, raising funds to fill the financial gap.
- **C - HC Solar Full Service** HC SOLAR SAS intervenes through HC SOLAR Services to deliver the turnkey installation and to manage the production and maintenance of the production installation. This Full Service requires direct and full investment by the real estate owner.

Product Mix over 5 years:

	A	B	C	Consulting
Mix	70%	25%	5%	On top
Projects	50	15	5	Renault SAS

c. Business Plan

Total investment over 2009 should reach 3M€ with 5 projects launched, 10.000M² and 0.6MWp installed.

i. Target markets

	Potential	Strategy
Renault Dealers Group Organization	over 600 point of sales with an approximate potential of 140.000KWp or 140MWh. (Membrane at 5% efficiency)	Project start with 2 key dealers in Burgundy with approx. 8000M ² / 360KWp BIPV to be installed until Q3/2009. 1 Sales rep. (already active) to negotiate and conclude additional agreements in the region and in France. Lobbying at the GCR
Renault SAS / Manufacturer	Large world-wide potential for Industrial and Commercial buildings - to be quantified	Consultancy proposal to integrate a decision process to systematically evaluate BIPV options when building or refurbishing real estates - Already launched Proposal in a second step of full package options incl. financing (Product A)

ii. Annual Sales Projection

HC SOLAR Consolidated					
	2009	2010	2011	2012	2013
HC SOLAR SERVICES					
Total Projects	5	10	15	20	20
Total M ²	10,000	30,000	60,000	100,000	100,000
Total Investment Turnkey Installations (M€)	2.6	7.6	14.4	23.0	23.0
HC SOLAR PRODUCTION					
MWc installed full year production	0.0	1.1	3.3	7.1	11.1
MWc installed produced N+1	0.6	1.7	4.6	9.2	18.4
TO Production Realized (M€)	0.0	0.7	2.0	4.4	6.9

The above calculation is based on the costs & efficiency of the *Solarintegrated* sealing membrane (conversion efficiency of +/-5%). Variations will occur depending on the use of other BIPV products (*Tenesol, Würth Solar, Hydro, Icopal, Texsa*). The projection for 2011 is linked to the product prices that will emerge between a feed-in tariff of 0.60€/KWh and 0.45€/KWh.

5. Financial summary

a. Income statement

(M€)	2009	2010	2011	2012	2013
Revenue	0.0	0.7	2.0	4.4	6.2
Cash Flow	0.0	0.3	1.7	3.7	5.3

b. Detailed income statements and balance sheet will be made available in the next stage.

6. Key Benefits

Investment Funds	Real Estate Owners	Founders	Banks
<ul style="list-style-type: none"> • Attractive IRR • Reduced investment risk 	<ul style="list-style-type: none"> • Attractive IRR • Economies on building renovation and Maintenance • Valuation of the property • Liquidity 	<ul style="list-style-type: none"> • Attractive IRR • Contribution to the CO² emissions reduction 	<ul style="list-style-type: none"> • Reduced investment risk

7. Management

- a. Hugues Chatelain, CEO with 15 years experience in sales & marketing: 13 years in the automotive (Renault SAS) and 2 years in the consumer electronics (Nikon Europe BV), management team functions for 7 years as MD / GM marketing & sales, working on the HC SOLAR creation since April 2008 from an idea born late 2007.
- b. COO, engineer in building industry: to be appointed
- c. FO / CFO: to be appointed

8. Cooperating partners

We look forward to establish partnerships with the following companies:

Building Industry	BIPV Products Manuf.	Quality insurance	Energy Distributor
<ul style="list-style-type: none"> • Investigation under NDA, Focus on ISO and critical size • Partnership with one installer organized 	<ul style="list-style-type: none"> • Centrosolar GmbH • Solar Integrated Technologies GmbH • AscentSolar through: Hydro, Icopal, Texsa • Würth Solar 	<ul style="list-style-type: none"> • Fraunhofer: ISE & IBP 	<ul style="list-style-type: none"> • EDF • GDF Suez

9. Contacts

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