#### Solar Power Parking Partnership International ltd. SPPPI

Prof. Dr. Ulrich DaldrupStudent Razan Al Hmoud 11087396Student Christophe Krug 11087269

23.03.2012



## Table of content:

- 1. Introduction
- 2. Market environment / Status quo of highway parking lots
- 3. Our goal
- 4. What we offer /What we expect
- 5. Market Analysis
- 6. Investment costs
- 7. Running costs / Advertising
- 8. Investment and financing
- 9. Calculation: total investment and depreciation costs
- 10. Calculation of financing costs: Interest paid on debt
- 11. 10 Year business plan
- 12. Feasibility

### 1. Introduction:

- SPPPI is a service provider.
- We are looking for convenient areas where it is feasible to build carports with photovoltaic plants.
- The construction is outsourced to a subcontractor who is also in charge for the maintenances work.
- The construction costs are fully covered by SPPPI.
- The ownership and the usufruct stays for 10 years by SPPI.
- During this period we are not in charge to pay rent to the Landlord.
- In return, our ownership as well as the usufruct of the carport and the photovoltaic plant goes to the Landlord after a period of 10 years.

### 2. Market environment / Satus quo of highway parking lots:

Although almost all recent cars are delivered with air-conditioning systems as standard, they can't prevent that parked vehicles heat up within a very short time.

The few-shaded parking lots under trees are in great demand.

The private operator of the French motorways are afraid of the investment costs for shaded parking lots.

Up to date there are no similar products on French highways.



#### 3. Our goals:

Improving existing highway parking and rest areas in Southern Europe by the construction of carports.

The roofs of the carports are equipped with photovoltaic plants.

The recovered energy is fed into the grid. The feed-in tariff (0, 42€ Cent / kWh) is guaranteed for 20 years and is adjusted to inflation.



### 4. Our offer / What we expect:

- -Solid, architecturally appealing carports to provide shade. (114 cars = 1824m<sup>2</sup>)
- Give the car park a modern, higher-quality look
- Full covered construction costs by SPPPI
- -Ownership goes to the motorway operator after 10 years
- -No rent for 10 years



#### 5. Market Analysis

0,42 € per kWh (guranteed for 20 years adjusted to inflation)

Estimated kWh per  $m^2$  / year = 174

Estimated revenue per m<sup>2</sup> / year = 73.08 €

Estimated revenue per 1824 m<sup>2</sup> /year = 133.297,92 €

### 6. Investment costs

Carport 1.824m<sup>2</sup> : 74.553,60€

Groundwork and construction: 73.133,28€

Solar power plant: 642.048,00€

Sum:

789.714,88 €\*

\* Including maintenance for 10 years

### 7. Running costs / Advertising

Home office: including rent, electicity, etc.:

500 € / month 6.000€ / year

#### 8. Investment and financing

Own investment (40%) = 360.000 €

Bank credit = 540.000 € with interst rate of 6%

# 9. Calculation: the total investment and depreciation costs

Investment goods	Investment expenditures	<b>Depreciation in</b> %	Depreciation costs
Solar carport	789. 714,88	10	78.971,50
Advertising	6.000	100	6.000
Circulating capital /Unexpected	104.285,12	0	0
Total investment	900.000	Total Depreciation costs	84.971,50

# <u>10. Calculation of financing costs:</u> Interest paid on debt

Year	Balance of dept	Interst rate %	Interest cost payed per year	Repayment per vear
1	540.000	6	32.400	54.000
2	486.000	6	29.160	54.000
3	432.000	6	25.920	54.000
4	378.000	6	22.680	54.000
5	324.000	6	19.440	54.000
6	270.000	6	16.200	54.000
7	216.000	6	12.960	54.000
8	162.000	6	9.720	54.000
9	108.000	6	6.480	54.000
10	54.000	6	3.240	54.000
Sum			178.200	

# 11. Year business plan

year	1	2	3	4	5	6	7	8	9	10
KWH	317376	317376	317376	317376	317376	317376	317376	317376	317376	317376
Revenue in €	133297.92	133297.92	133297.92	133297.92	133297.92	133297.92	133297.92	133297.92	133297.92	133297.92
Costs										
Depreciation costs	84971,50	84971,50	84971,50	84971,50	84971,50	84971,50	84971,50	84971,50	84971,50	84971,50
Financing costs	32400	29160	25920	22680	19440	16200	12960	9720	6480	3240
Total of costs	32400	29160	25920	22680	19440	16200	12960	9720	6480	3240

# 11. Year business plan

year	1	2	3	4	5	6	7	8	9	10
Profit before										
tax	100,897.92	104,137.92	107,377.92	110,617.92	113,857.92	117,097.92	120,337.92	123,577.92	126,817.92	130,057.92
Taxes (40%)	40,359.168	41,655.168	42,951.168	44,247.168	45,543.168	46,839.168	48,135.168	49,431.168	50,727.168	52,023.168
Profit after		( <b>)</b>	6 f						6	
taxes	60,538.752	62,482.752	64,426.752	66,370.752	68,314.752	70,258.752	72,202.752	74,146.752	76,090.752	78,034.752
Cash-flow	60,538.752	62,482.752	64,426.752	66,370.752	68,314.752	70,258.752	72,202.752	74,146.752	76,090.752	78,034.752
Repayment credit	54,000	54,000	54,000	54,000	54,000	54,000	54,000	54,000	54,000	54,000
Dividend	40,527,35	8,482.752	10,426.752	12,370.752	14,314.752	16,258.752	18,202.752	20,146.752	22,090.752	24,034.752

### 12. Feaslibity

#### TOTAL PROFIT IN 10 YEARS Circulating capital

146,328.768 104,285.12

25,0613.9

Own savings 360,000

250,613.9 -360,000= -109,386.1

No feasibility in a 10 years period