

Rawlemon™

MicroTrack500HY

promoted by Sbotic ltd

Simulation of the "Six Cities High Rise" in Paris (south face)

LOCATION	SOLAR RADIATION	ANNUAL SOLAR RADIATION	BETA.RAY SURFACE 50% eff.	SYSTEM RATED POWER	TOTAL ENERGY GENERATED PER YEAR	CONVERTED TO MWh	CONVERTED TO kWh	TOTAL ENERGY OPERATED PER YEAR	ENERGY SURPLUS PER YEAR	ELECTRICITY HOUSEHOLD \$/kWh 2014	Feed-in Tariff Household \$/kWh 2014	ANNUAL ENERGY OFF-GRID SAVINGS (\$)	AVERAGE ANNUAL ENERGY REVENUE (\$/5,1%) 30 years	CONSTRUCTION COST PER m2 BY CITY (\$/m2)	TOTAL COST OF CONSTRUCTION BY CITY (\$)	AVERAGE FINANCING COST OVER 30 YEARS (\$/6%)	COST PER CELL OF 30m2 (\$) OF TOTAL	COST PER m2 (\$)	BREAK EVEN POINT IN % LOAN PER m2	CO2 EMISSION SAVINGS (Tons) vs. COAL	RETURN OF INVESTMENT (years)
	(Wh/m2)*	(kWh/m2)	(m2)	(kW)	(GWh)			(GWh) **	(GWh)	\$/kWh 2014		30 years	years		CITY (\$)		80 CELLS		PER m2	COAL	(years)
PARIS	4.603	1.680	406	201	0,34	341	340.973	0,15	0,19	0,18	0,19	61.253	139.236	2.408	12.133.800	428.728	151.673	5.056	32%	329	87
PARIS FIT***	4.603	1.680	406	201	0,34	341	340.973	0,15	0,19	0,18	0,19	64.500	146.972	2.408	12.133.800	428.728	151.673	5.056	34%	329	83
Perks (KS) - 5 years period full booked incl. energy profit															2.746.897				23%		
Perks (KS) - 5 years period full booked incl. energy profit FIT															2.785.573				23%		
Revenue of 20 units property after Kickstarter campaign															3.791.813				31%		
Sum - perks and property															6.538.709				54%		
Estimated funding goal 60% (rounded)															7.280.000				60%		

* source: <http://re.jrc.ec.europa.eu/> - Solar irradiation: G 2-axis tracking

** source: Lemon Consult Zurich / total consumption / year: 30 kWh/m2

*** Feed-in Tariff (FIT) - basically subsidies/surcharge from government to promote renewables

Total consumption / year: 30 kWh/m2	30000	Wh/m2
Floor surface of the building: 240m2 per level x 21 levels	5040	m2
South oriented surface: 15,35m x 61,50m (Brutto 944m2) - Ball lens net area 43%	405,92	m2 (43%)
50% efficiency = 500W/m2 (measured by 1.5AMd, 1000W/m2, T= 25°)	0,5	kW/m2
1 year	365	days
1 Module: 20 Balls / 0,25m2 / 50% efficiency = 5,014m2	2507	W/Module rated power output
80 Modules =	200560	System rated power /kWp
Efficiency per m2:	0,215	kW/m2

UNITS CONVERSION

1 Kilowatt	kW	1.000	W
1 Megawatt	MW	1.000.000	W
1 Gigawatt	GW	1.000.000.000	W
1 Terawatt	TW	1.000.000.000.000	W

ANNUAL ENERGY LOSSES by TILT and Reflection

horizontal	25,00%
optimized angle	20,00%
vertical	60,00%
dual axis tracking system	0,00%