



Investment sheet loan

Overview

Company name:	Amarenco Crowd (Torreilles Solar Park)
Website:	http://www.amarencosolar.com/projects/perpignan/
Contact:	Olivier Houdaille (olivier@lumo-france.com)
Type of financing:	Subordinated Loan
Goal amount:	€ 100,000
Interest:	5% annually (paid annually)
Duration:	3 years
Repayment:	Bullet repayment at maturity
Subordination:	Subordinated to project finance bank loan (EUR 18m)
Securities:	n/a

What makes your business stand out?



Torreilles Solar Park, Perpignan

Torreilles is a solar park combined with greenhouses at the end of the Route du Soleil developed by *Amarenco Solar*, a professional power company that invests in, builds and operates solar power plants. Located in the sunny south of France, this solar park is perfectly located to harvest high amounts of solar energy.



The solar park has been completed successfully in 2015 and is currently in full operation. It consists of 96 greenhouses equipped with solar panels, totalling 9.6MWp of power (equal to the electricity usage of 5200 households). The greenhouses are used by local farmers. Amarenco is now providing the crowd with the opportunity to invest in the Torreilles project. This way Amarenco can involve the public in their renewable energy projects. A crowdfunding campaign for Torreilles has recently been concluded in France by crowdfunding platform Lumo and will now be expanded to Dutch investors via Oneplanetcrowd. Oneplanetcrowd and Lumo collaborate with each other within the European project CrowdfundRES, to stimulate crowdfunding for renewable energy generation.

About project developer Amarenco:

Amarenco is an independent power company that invests in, builds and operates solar power plants. Amarenco is dedicated to harvesting Solar energy in an environmentally responsible way, as part of a global transition from fossil fuels. Amarenco commissioned its first project investment in 2014 and now has over 50 MWp of operating solar projects. Amarenco has over €100m of assets under management, and has successfully completed five substantial deals in France on behalf of institutional financiers and high net worth investors. Together, Amarenco's top team of energy executives have delivered over €5bn of renewable energy investments over the last 20 years.

Briefly describe the financial position of your business

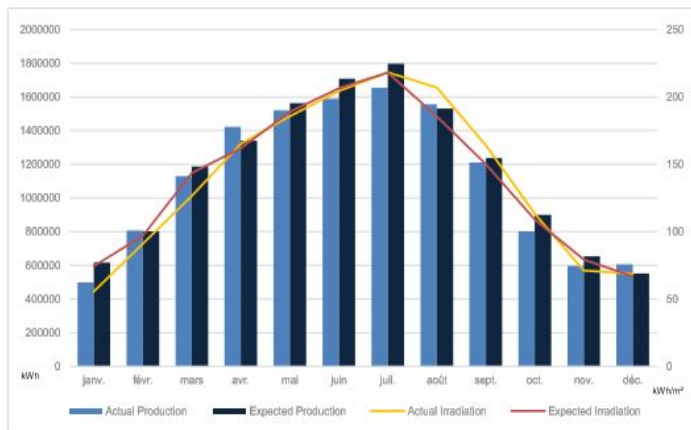
What are your most important sources of income and expenses?

Cash Flow €000s	2016	2017	2018	2019	2020	2021	2022
Turnover	2.567	2.572	2.577	2.582	2.587	2.592	2.598
EBITDA	2.216	2.218	2.220	2.221	2.223	2.225	2.226
Senior Debt Service	(1.549)	(1.540)	(1.321)	(1.321)	(1.321)	(1.320)	(1.320)
Tax	(72)	(98)	(117)	(138)	(160)	(182)	(205)
Net Free Cash Flow	595	580	781	762	743	722	701
Interest Crowd		(13)	(40)	(40)	(27)		
Repayment Crowd					(800)		

Above show the projections starting from 2016. The plant has operated as roughly in line with expectations: In 2016, the project has produced 13.392.234 kWh versus the budgeted 13.886.411 kWh, leading to a slight negative difference in revenues: €2.46m versus budgeted €2.57m. This is

due to some start-up problems with the monitoring system and AC breakers which have now been fixed. From 2017 onwards the plant is expected to perform in line with above projections.

Total maximum loan of the crowd – Lumo plus Oneplanetcrowd – will be €800k. Approximately €100-120k is available via Oneplanetcrowd and the remainder is funded through French crowdfunders in the Lumo platform). The projections show that around €580k-€740k will be left over each year by the project, which means after three years there will be more than enough cash available to repay the €800k loan in full (as well as the 5% annual interest payments).



1 Chart of expected versus realised performance in 2016

What is your financing requirement and what will you spend the money on?

The total investment for the Torreilles solar power plant amounts to €23.7 million. To finance the project, a bank loan of €18 million has been obtained from a German bank (SaarLB). The remaining amount of €5.7 million has been invested by project owner Amarenco. The project has already been constructed and is now fully operational, meaning that crowd investors no longer run any construction risk.

Amarenco has now offered French and Dutch crowdfunders to co-invest in their project. In total, €800.000 of the €5.7 million is available for crowdfunding. €600.000 has been invested by French investors through crowdfunding platform Lumo (www.lumo-france.com) in a first financing round. The second round of €200.000 will be shared between Dutch investors and French investors via Oneplanetcrowd and Lumo, both crowds having the same financial conditions.

The main objective is that Amarenco is keen on having civil participation in its solar projects and uses crowdfunding as a means to achieve this. Amarenco will use the capital from Torreilles' crowd investors to build future solar power plants in France.

Briefly describe your business

Which product/service do you offer and what is your business model?

- The Solar greenhouses are located in Torreilles, close to the city of Perpignan in South West France
- 96 Solar Greenhouses with a total of 37000 solar panels

- Connected to grid: September 2015
- Total Capacity : 9,6MWp, expected output : 14 000 MWh / year
- Equal to the energy consumption of 5200 households
- Amount of CO2 reduced: 1100 tonnes per year
- Solar panel produce: CanadianSolar
- Feed in tariff: 18.37 c€/ kWh - Duration of the purchase price : 15 years
- The greenhouses are used by local French farmers
- At the end of the life of the solar panels (40 years) the solar panels will be recycled into new raw materials by French solar panel recycling company PV Cycle
- The sites for the Project comprise 7 plots that are owned freehold by the project, with one being the subject of a long term 30 year leases from the local municipality

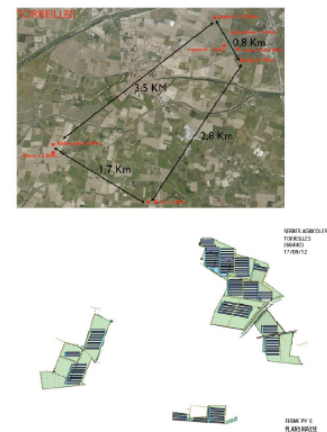
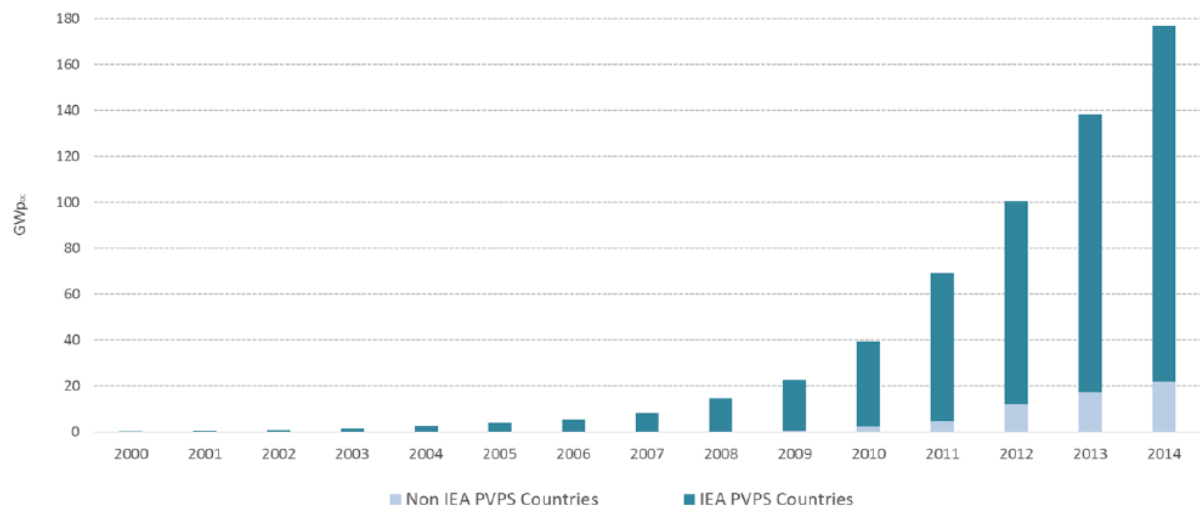


Figure 6: Plant Sites and Satellite Image of location

What does your market look like?

Solar is an abundant natural energy resource available on the planet which potentially offers a predictable generation profile and low installation and life-cycle risk. Growth levels have already outpaced the historical growth of renewable wind energy, with over 30GW of new installations in each of 2011 and 2012, and over 38 GW of Solar PV added in 2013 and 2014. New installations of Solar PV generating capacity now exceed those of any other primary energy source in each year since 2011. Total solar installed capacity globally at the end of 2014 amounted to at least 177 GW. In the EU, an estimated 38-70GW of solar PV capacity is expected to be added to the existing 81.5GW by 2018.

FIGURE 1: EVOLUTION OF PV INSTALLATIONS (GW_{pdc})



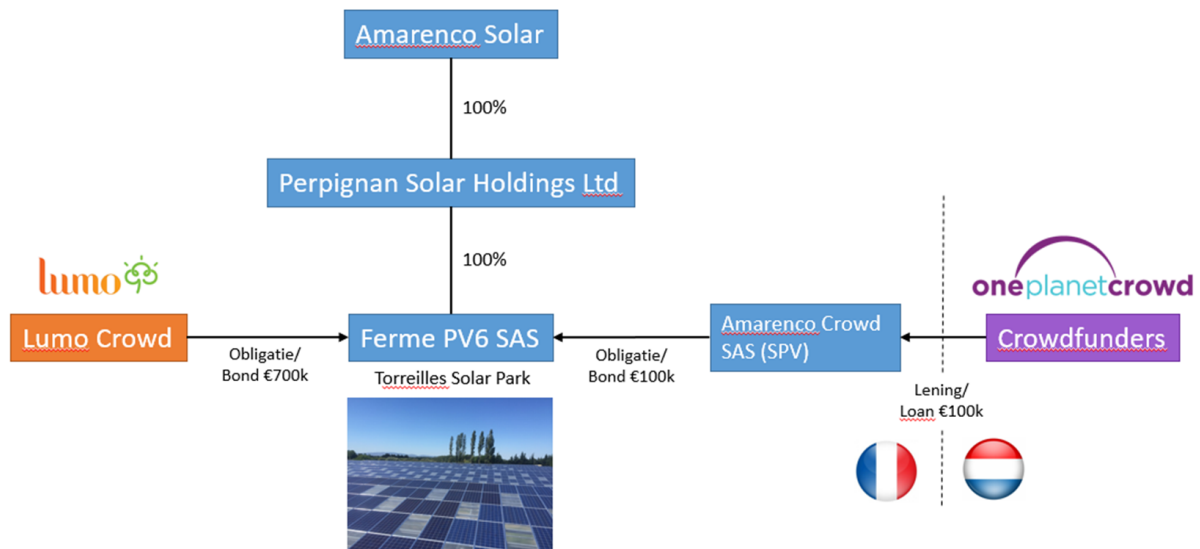
Source: IEA PVPS

France has a well-established solar energy industry, both in terms of technology manufacturing and plant installations. The French government has a strongly supportive position with respect to Solar PV. It is also committed to achieving the target of 23% of energy production from renewable energy sources by 2020, with a further reduction of 30% and 40% in fossil fuel consumption and greenhouse gas emissions respectively by 2030. Also, France is looking to reduce its dependency on Nuclear Energy and sees solar energy and other renewable sources as playing a key part in this. There are significant increases in solar energy targeted over the coming ten years.

The country has a naturally high degree of irradiance (sunshine) ranging between 1,200 kWh/m² per annum in the North to 1,600 kWh/m² per annum in the South. The Torreilles site receives 1,532 kWh/m² pa.

What do the team and organizational structure look like?

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Amarengo, has set up a local entity, a Special Purpose Vehicle (SPV) to which the investor of Oneplanetcrowd provides a loan. This entity is Amarengo Crowd SAS. Lumo is in the board of this entity. With the capital of the crowd, the SPV buys bonds from project entity Torreilles Solar Park: Ferme PV6 SAS. These bonds (obligaties in Dutch) are the same bonds as sold to the French crowd of crowdfunding platform Lumo and have the exact same financial conditions as the loan agreement offered to Oneplanetcrowd's investors. In short, all investors of Lumo and Oneplanetcrowd have identical financial terms, while both crowdfunding platforms offer their own financial product to which their investors are used to and for which each platform has its own permit of the Authority Financial Markets (the French respectively Dutch financial regulator).

Who are the key individuals in the team?

The solar greenhouse will be managed by professional solar plant developer Amarengo Solar (see first part of this investment sheet). For further reading on Amarengo, please refer to their website:

<http://www.amarencosolar.com/>

EPC contractor: Ralos

Ralos is a reputable Solar PV EPC contractor established in 2012 and owned by Kaco New Energy GmbH, a privately owned engineering group in Germany. Since its establishment, Ralos has constructed in excess of 150MW of solar plants throughout Europe, and also provides O&M services on an ongoing basis to approximately 100MW of solar plants. Ralos has a strong reputation in the industry.

Findings

- Project already realized in 2015, with 2016 as the first full year of operation. Therefore, there is no construction risk anymore. In 2016 the electricity production and revenues were in line with budget.
- Proven technology, solid project contracts (such as maintenance, insurance and a power purchase agreement) and an experienced project management team make a solid business case.
- A great location for a solar power plant (Route du Soleil near Perpignan), which results in a more productive and efficient power plant compared to one in the Netherlands.

Risks and mitigants

- Risk: EDF (the company that purchases the electricity generated by the plant) defaults on their payment obligations (for instance because of bankruptcy).
Mitigant: EDF is a large company, with an A+ credit rating. If EDF defaults nevertheless, other electricity companies can be found to take over the power purchase agreement.
- Risk: There is lower sun irradiance than expected, resulting in a lower energy production.
Mitigant: The solar resource is highly stable and predictable over time and assumption are conservative. In case of longer lasting low irradiance levels, the business case is strong enough to cover this or make up for losses in later years, given the long-term power purchase contract.
- Risk: The technical performance of the solar-PV system is worse than expected.
Mitigant: the solar-PV systems were fully subjected to technical due diligence. Furthermore, the performance result in 2016 were good, with some minor issues which were conveniently solved. Also, compensation of any underperforming system is included in the project contracts and insurance policy.

Read more about how Oneplanetcrowd assesses entrepreneurs [here](#).

Type of financing & conditions

The investment entails a loan of 3 years bearing 5% interest, annually paid. The loan will be repaid fully after three years. The loan will be subordinated to the bank loan of SaarLB.

The total loan will be EUR 800.000. In partnership with French crowdfunding platform Lumo, Dutch investors will be able to invest approximately EUR 100.000-120.000 in this project. The rest has already been invested by French investors on the Lumo platform (on equal financial terms).

General Risk Information

By presenting this investment sheet, Oneplanetcrowd does not, in any way, give investment advice. The profiles presented on the website are explicitly not recommendations on the part of Oneplanetcrowd to grant money. The investor will form his or her own judgement, optionally with the help of his or her own

adviser. Diversification is an important aspect of reducing risks. It is advisable to read the information provided about the projects and enterprises carefully. Oneplanetcrowd also believes it is advisable to invest no more than 10% of your investable assets in crowdfunding projects and to spread your risks by dividing your total investment among multiple projects. Using money from loans is strongly discouraged. It is possible for an enterprise to fall short of the projected results during the duration of the loan. It is even possible for the company to go bankrupt during this time. In contrast to savings held by banks, the loans granted by crowdfunders are not protected by the deposit guarantee scheme (depositgarantiestelsel) or any other guarantee scheme. Granting loans therefore entails risks. Oneplanetcrowd in no way guarantees that no mistakes or errors were made, or that the plans contain no inaccuracies. Plans are based on future projections, which by definition contain risks and uncertainties.