

# PV Financing Best Practice: Oakapple, Abundance Single Family Homes (UK)

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## General project Description

Oakapple One plc has been set up by the directors of the Oakapple group of companies to own and manage a portfolio of rooftop PV systems that have been installed on newly built residential properties. The systems are designed and their installation project-managed by Oakapple Renewable Energy Ltd. The solar panels are installed as part of the construction process and already generating electricity when the homeowner moves into their new home. The homeowner uses as much of the electricity generated as needed free of charge. The project funded the purchase of completed PV systems from Oakapple Renewable Energy and includes systems installed on individual houses as well as several installed on flats generating electricity for the benefit of all the residents.

The Code for Sustainable Homes was introduced to encourage house builders to make new homes more efficient and to generate a proportion of their electricity needs on-site. Oakapple are working with the fourth largest national house builder to help them meet the standards set up the Code. The new homes have a lower impact on the environment and mean cheaper electricity bills for homeowners.

The project raised £480,000 to purchase 435 kWp of solar PV installations. The main drivers behind the project were to reduce their building tenant's energy bills and make an income by renting the roof space.



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 646554



## Business case description / economic parameters

The concept is simple. Abundance raises the money a renewable project needs from individual investors and, once a target is reached, the project begins, or continues. The platform works with wind, solar, anaerobic-digestion and hydro projects at various stages of their development. Investors, in return, share the financial benefits of the projects and can lock into inflation-beating returns, while knowing that their cash has been used to fund schemes they support.

Abundance uses debentures, which are effectively long-term unsecured loans taken out by a company, which it agrees to repay at a specified date. Oakapple will repay its debenture after 20 years but will pay investors between 7.35% and 8.6% year in twice-yearly payments in the meantime. This project will be effected due changes in legal framework around subsidies in the UK.

Oakapple One's revenue will come from the Feed-in Tariff, a government scheme designed to encourage small scale renewable energy generation. The tariff is made up of two elements:

- A Generation Tariff payable for every KWh of electricity generated.
- An Export Tariff payable for every KWh of electricity exported to the national grid.

These subsidies are guaranteed for 20 years. The amount of feed-in tariff revenue received will depend on the electricity generated, which will depend on the level of exposure of the solar panels to sunlight.

Based on the figures above, in their first year, the panels are expected to provide income of £69,970.

As the Feed-in Tariff rises each year in line with the Retail Price Index, revenue will increase each year at an average assumed rate of 2.8% a year. A 10% higher or lower inflation rate translates into 3% higher or lower revenues.

## Technical project parameters

The technical project parameters were very simple in this project. The project pre-installed solar panels on new-build housing projects across England, which delivers free energy to the occupants, while the sun shines.



## Stakeholders / companies / PPA

Oakapple Renewable Energy were the project's developer and project manager for Oakapple One plc. The role of Abundance is to facilitate the issue of the Debentures and to provide a platform for investing in them. Abundance also provides ongoing services in

relation to the debentures, including acting as registrar, arranging payment of cash returns to debenture holders and providing regular information on Oakapple One and how much electricity the panels are producing. Oakapple Renewable Energy now runs the O&M.

## **Replicability / Outlook**

This model is replicable in terms of other similar assets that you install and that require finances for. There have been further projects from Abundance under the scheme. In the specifics of solar the challenges in replication is the financial support in place in the country. The model can be applied anywhere but report the project relies on revenue from the Feed in Tariff. The project would not survive in a zero subsidy environment unless the cost of installation reduced and storage was more readily available.