Practical Experience with Applications of the Guidelines

Report on practical experience on using crowdfunding for funding RES projects

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CrowdFundRES
Unleashing the potential of Crowdfunding for Financing Renewable Energy Projects

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Table of contents

Aim of the Document

This report has been developed within the CrowdFundRES project, which is funded by the European Commission and aims at contributing to the acceleration of renewable energy growth in Europe by unleashing the potential of crowdfunding for financing renewable energy projects. In order to achieve this, the work has been structured for achieving the following objectives:

1. Deepen the understanding of the adoption of crowdfunding for financing renewable energy projects.
2. Analyse the challenges faced by the application of crowdfunding for renewable energy projects in Europe.
3. Develop and apply guidelines that support more effective practices.
4. Help improve the market and regulatory framework in Europe.
5. Promote the crowdfunding concept and its advantages among those who could contribute or raise funds.

During the first half of the project, CrowdFundRES generated case studies from four of Europe's leading renewable energy systems (RES) crowdfunding platforms, documented in D2.4 Renewable Energy Crowdfunding Case Studies[1] (see http://www.crowdfundres.eu/results/). The experience collected from this result, together with the insights from the surveys and workshops carried out within the project, fed into a first series of draft guidelines for Platforms, Project developers and investors interested in engaging with crowdfunding activities.

The draft guidelines developed and available on the project website[2] have been applied in the second half of the project to support easier, more effective and wider accepted practices in crowdfunding renewable energy projects.

In particular, this document provides an overview of 8 crowdfunded projects listed on the partner crowdfunding platforms during the last 18 months of the project, in which the guidelines have been taken into account.

The aim of this document is to compare the experiences of preparing and delivering the associated crowdfund raise in each of the cases studies with the Developer and Platform Guidelines and, where relevant, suggested additional insight that could be incorporated into the final guideline documents to be delivered by the end of the project (January 2018).

[1] Abundance Investment Ltd, "Report on the practical experience of RES project financing using crowdfunding", 1st Sept. 2016, Available at http://www.crowdfundres.eu/wp-content/uploads/2016/09/CrowdFundRES_Case_Studies.pdf

[2] http://www.crowdfundres.eu/results/

Structure of the document and case studies documented

The case studies reported in this document are built up in the following structure:

- **Platform** responsible for the crowdfunding campaign.
- The **background of the project** section provides an overview of how the project was sourced in addition to relevant technical info.
- **Project description**. This section gives information on the company structure, financing structure, key terms of the crowdfunding investment and the use of funds.
- **Key elements of the due diligence process.** This section details the aspects and contracts that were assessed in the DD process.
- The **marketing campaign description** provides information on how the campaign was promoted.
- **Lessons learned.** This section collects experiences distilled from the project that could be actively taken into account in future crowdfunded projects.
- **Practical experience applying the CrowdFundRES project guidelines**. The draft guidelines developed within the CrowdFundRES project provide answers to crowdfunding platforms interested in hosting renewable energy projects, to renewable energy project developers interested in financing their projects through crowdfunding and to investors interested in investing in RES project through crowdfunding and have been developed to support more effective practices. This section refers to the questions included in the draft guidelines that have been taken into account in each project and compares the questions with the experience of preparing and delivering the associated crowd fund raise and, where relevant, suggested additional insight that could be incorporated into the final guideline documents to be delivered by the end of the project (January 2018).

For the correct understanding of this document, we recommend the reader review the guidelines for investor, platforms and project developers[3] prepared within the project and available on the project website.

[3] http://www.crowdfundres.eu/results/

Report on practical experience on using crowdfunding for funding RES projects

1. Project: Torreilles Solar Park

Platform: Oneplanetcrowd (OPC) and Lumo Collaboration

https://www.lumo-france.com/projets/toreilles
https://www.oneplanetcrowd.com/nl/project/189076/description

Background: How the project was sourced

The project was sourced through the independent power company Amarenco. Amarenco invests in, builds and operates solar power plants. The power company 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.

Amarenco had already developed the solar park with its own equity, and had thereafter approached Lumo to refinance part of the equity through crowdfunding (€1m of the total €6m). This way, the crowdfunders did not run any construction risk and could participate in a well-structured transaction.

Project description

The project in which Lumo and Oneplanetcrowd cooperated, involved building a solar power plant in the French village of Torreilles. The solar panels are fitted onto 96 greenhouses, making them 'serres solaires'. These 96 greenhouses are used by local farmers. They are sited on three locations and cover a total of 43 Ha. The total of 37,000 solar panels can produce up to 14,000 MWh per annum, which can power 5,200 households and will reduce CO2 production by 1,100 tonnes per year. The solar panels are produced by CanadianSolar. At the end of their lifespan these solar panels they will be recycled into new materials, which are usable for other sustainable aims.

Company structure

The Torreilles project was the first crowdfunding campaign in which crowdfunding platforms cooperated across borders. This was made possible due to proper structuring of the transaction;

Amarenco set up a local entity, a Special Purpose Vehicle (SPV), to which the investors of Oneplanetcrowd provide a loan. This entity is Amarenco Crowd SAS. Lumo is on 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 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 which their investors are used to and for which each platform has its own permit from the French/Dutch financial regulators. See the figure below.

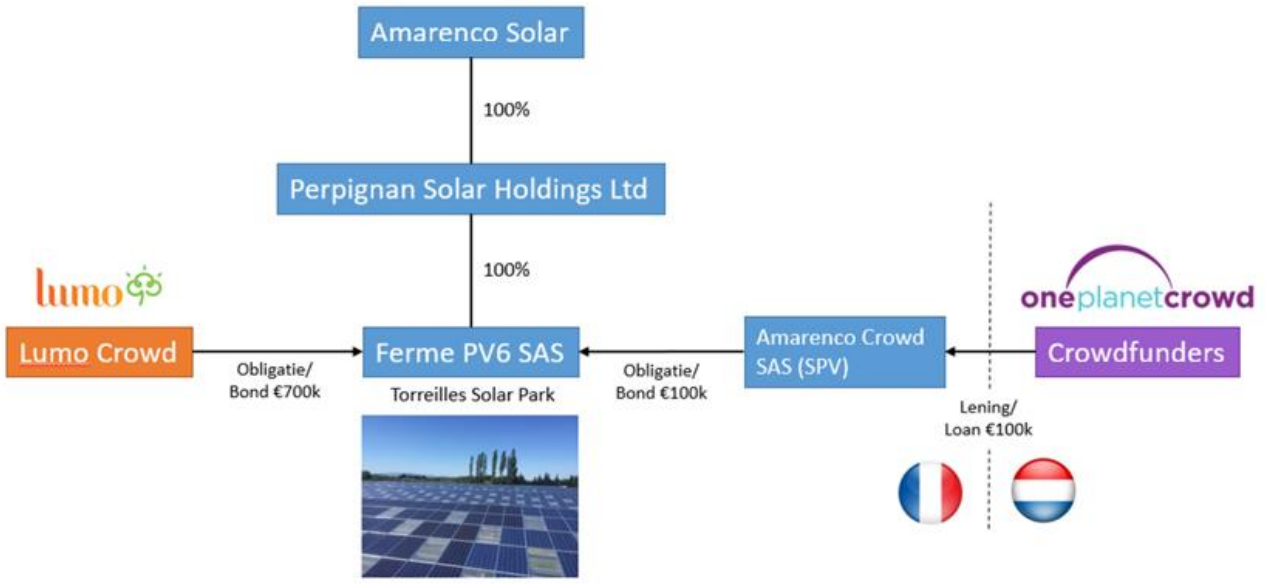

Figure 1- Financing structure

Financing structure, key terms of crowdfunding investment and use of funds

At the start of the crowdfunding campaign, the whole Torreilles project had already been financed and built. The costs for the project totalled €23.7m, which was financed by a loan of €18m provided by the German bank SaarLB. The remainder was invested in equity by the project owner Amarenco. Amarenco was keen on having civil participation in its solar projects and was interested in using crowdfunding to achieve this aim. They crowdfunded this project in France (Lumo) and in the Netherlands (Oneplanetcrowd) and successfully financed €800,000. This money will be used for other solar projects in France.

As said earlier, because of the company structure, it was possible to offer the same financial terms to the French investors of Lumo and to the Dutch investors of Oneplantcrowd. The financial terms of the Torreilles project are the following:

- Type of financing: Bond (Lumo) / Subordinated Loan (OPC)
- Interest: 5% annually (paid annually)
- Duration: 3 years
- Repayment: Bullet repayment at maturity
- Subordination: Subordinated to project finance bank loan (EUR 18m)

Key elements of the Due Diligence process

The following aspects and contracts were assessed by Lumo and Oneplanetcrowd during due diligence. Lumo conducted the due diligence process with Oneplanetcrowd relying on Lumo's due diligence.

- Project exploitation plan
- Financial plan, capex (at t=0), forecasted P&L, balance sheet and cash flow statement
- P&L of last 2 years (if available)
- Relevant permits
- Contract for land use/ownership
- Engineering, Procurement, Construction contract
- Operations & Maintenance contract
- Relevant contract(s) guaranteeing revenues: feed-in tariff / power purchasing agreement
- Relevant tax/legal/subsidy documents, needed to realise/meet financial plan for realisation/exploitation
- Finance agreements of key financiers
- Ownership structure overview
- Insurance contracts

Marketing Campaign Description

The project was promoted via multiple channels. The most important channels were the websites of Lumo and Oneplanetcrowd, and social media outlets on which these platforms are active. Furthermore, the project was promoted through various newsletters as well as an international press release, which was picked up by a number of niche renewable energy media. Oneplanetcrowd sent a pre-announcement email to the crowd with the investment sheet of the project, before the project was put live. Once put live for investing, the crowd of Oneplanetcrowd rapidly invested in the project. The strong 'appetite' for the project was caused by the fact that it was an already operational solar park. The fact that the Dutch know this French region from their sunny holidays, helped in the communication to get attention for this solar park.

In total 332 French and 106 Dutch investors invested in Torreilles for a total of €800,000. The French investors invested €680,000 and €120,000 was invested by Dutch investors. This cooperation was unique, which also attracted investors. The biggest challenge was building a framework in which both Lumo and Oneplanetcrowd functioned within the law in their respective countries and to make this structure understandable for the investors.

Lessons learned through doing project

The Torreilles project showed the tremendous potential of cross-border crowdfunding. The Dutch crowd was very keen on investing in a French project. The process of creating a structure in which both crowdfunding platforms respected the law of their respective countries was very difficult and costly. In the end, an innovative structure was developed and this structure could be used on a broader scale between French and Dutch platforms.

Amarenco was very happy to 'welcome' Dutch nationals as co-financers. With an Irish developer, German bank and French & Dutch crowdfunders, this project was truly a pan-European success story. This experiment also clearly demonstrated that Europeans do have an appetite to make direct cross-border investments.

Unfortunately, the financial cost, time and effort required to make such an innovation work, are too high for regular usage. The regulation for cross-border activity will have to improve to make such deals cost effective in the future.

Practical experience applying the CrowdFundRES project guidelines

The case study was reviewed against the guidelines for renewable energy project developers and for crowdfunding platforms (see http://www.crowdfundres.eu/results/). The main findings are shared below, following the order of topics of the guidelines.

Guidelines for RES Project Developers

'What should developers ask themselves?'

The questions listed in this section are relevant and useful. They provide guidance to the project developer in deciding and preparing for crowdfunding. A suggestion is to add the following question:

'Do I see opportunities to use crowdfunding repeatedly?'

Such a question makes the project developer consider using crowdfunding for the long run too. It may also be used to emphasize the fact that a follow-up campaign offers efficiency benefits to both the platform and the project developer: less due diligence and less new crowd is needed as the crowd from the first campaign can be involved again. Most platforms have a crowd that builds up a personal investment portfolio and seeks to invest in multiple projects to spread risks.

'What questions should project developers ask platforms?'

While using the questions we came up with a few suggestions for improvement:

Under, 'what are the costs that crowdfunding involves?' one may add the sub question: 'Regarding campaigning, how much time and out of pocket expenses (text writing, video, campaign planning) are needed from the project developer?'

Add 'Campaign coaching and support' under 'benefits that platform will provide'.

Two general solutions may be added under 'What happens if the platform ceases to trade?': Quality platforms have built in recurring revenues on future cash flows from project owners to investors. This enables a platform, in case it ceases to trade, to transfer its portfolio to another party, including the respective administration system and obligations. In case a platform stops its services, it may also enable the project developer to fulfil its obligations directly towards its investors.

'Case studies'

The case studies provide clear and practical info. What can be added is how the campaign itself progressed: 'Who were the specific target groups, when were they approached and via which channels?'

Guidelines for Crowdfunding Platforms

These guidelines are written for those platforms that are new or that are expanding their offering towards project finance. Although it was less applicable to the situation of Oneplanetcrowd, we used our experience to imagine what information a new player would appreciate in this document. While applying the guidelines, we found a few suggestions for improvement. We share them below.

'The Crowd'

Under, 'how do I promote a crowdfunding campaign?' one may consider adding:

In surveys investors often indicate 'helping to realise the project' as their top priority, but in actual practice projects that offer a higher return fill faster than the ones offering a lower return. Hence the key financial conditions (annual percentage rate and period of financing) should be most prominent. Furthermore, the reader expects a short summary text on the project and on the project developer. To gain trust from the investors: if the project developer is an experienced player, emphasize this and give examples of previous projects.

Avoid terminology that makes the platform and project owner seem dependant on the investor. Communicate the call to action in terms of an interesting opportunity one can be part of. So, don't use terms like 'help' or 'support' but use 'fund', 'finance', 'join' and 'participate'.

Under 'what kind of follow-up work is required after a project has been funded?' it may be good to add:

The biggest turn off for investors is that some platforms and project owners do not provide regular updates on the projects they invested in. It is advisable to make sure that your investors receive an update from their project at least once every six months.

'Projects'

A suggestion for the answer of 'what types of energy technologies are best suited for crowdfunding?': A PV project related to a specific location, area or building with local or even national fame, may find above average attraction from the crowd. Think of solar panels on the roof of a landmark building, a regional hospital, a large school or a reputable company. In the case of Oneplanetcrowd and Torreilles, it helped in the communication that the 'serres solaires' were located close to the Route du Soleil, well known in The Netherlands.

About due diligence: an example list of key documents to be collected during the process of due diligence may be added. The list provided above (under project description – key elements of due diligence) can be used as an example.

An additional question in this section could be 'what is an ideal amount of capital to be raised per project?' Simply said: larger projects generate more revenues for a platform, smaller projects are easier to get fully funded by the investors. Especially in the beginning of your platform, you want to show success, while you do not have a large crowd yet. It is recommended to keep the project size lower in the beginning (€50k – €250k) and increase the size later on. In order to cut costs, and still have a profitable model while servicing small projects, focus on project developers with whom you can repeat funding similar projects, while not having to repeat the entire due diligence process.

'IT'

The last paragraph under 'escrow services' could elaborate a bit more on the following: Many payment service providers offer escrow services at the same time, which is beneficial for platforms. Make sure you get quotes from multiple players and let them explain how they comply with regulation. Ask for references from current clients and speak to them about their experience with the payment provider. Your payment service provider will be one of your key partners to make your business work. This partner needs to be reliable, cost efficient and practical to integrate with your website. Make sure they offer the common payment methods in the country – or countries – you operate in. Be aware that many payment processors charge a percentage as a commission, which can be (too) expensive for larger transactions. Payment methods with a flat rate and/or low percentage may be preferable.

'Legal'

Advice to be added for platforms with international ambitions: In case you want to expand to other countries later on, make sure you choose a financial product that is eligible in the countries of expansion as well. In that sense, you can use the same contracts and an entrepreneur can raise funds for the same project in multiple countries, having the same financial conditions with all investors.

2. Project: Solease

Platform: Oneplanetcrowd (OPC)

https://www.oneplanetcrowd.com/nl/project/198188/description

Background: How the project was sourced

The project was sourced through the network of Oneplanetcrowd's initiator Start Green Capital. Solease had already received project finance from regional fund Energiefonds Overijssel, managed by Start Green. For this crowdfunding campaign Solease was eager to attract a convertible loan (to be converted to equity) from the crowd. Attracting the crowd as future shareholders was of interest to Solease as they are a young business to consumer brand, continuously seeking opportunities for increased brand awareness. Having a crowd of investors enables ambassadorship for the brand and offers opportunities for word of mouth outreach and lead generation.

Project description

Technology type

Solease finances solar panel installations primarily at household level and to a smaller extent on rooftops of SMEs. To make solar panels available for everyone, Solease leases them for a monthly amount that is often lower than the current electricity bill. In this way, all households can switch to sustainable energy from their own roof and save on average 2,000kg CO2 per year. The monthly lease includes full service with financing, installation, monitoring, repair and insurance. The customer also builds up a yearly purchase discount of €250 for their own solar system

Company structure

The crowd invested in the holding company: Solease BV (BV is the equivalent of Ltd). The holding company has 7 daughter companies: one exploitation entity Solease Management BV with all staff of Solease and 6 project SPVs with the solar panel installations and rental contracts. This somewhat complex structure with multiple SPVs was chosen to service the numerous Dutch regional funds that can only finance installations and contracts in their own geographic region.

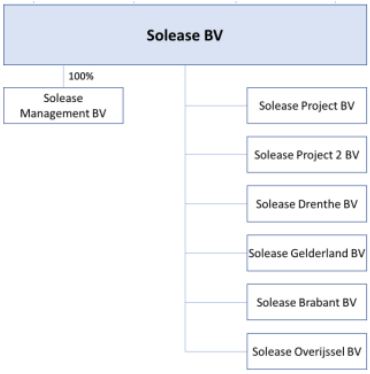

Figure 2 - Financing structure, key terms of crowdfunding investment and use of funds

Solease's funding target for this round was €1m. €200k would come from its current shareholder, €200k from a new investor and €600k from the crowdfunding campaign. The total finance for the growth of Solease BV is the last piece needed for it to continue independently and in a scalable way. In this way, they would be able to provide 10,000 homes with solar panels and grow up to 20,000 per year. Breakdown of use of funds:

- Investment in the (after)sales team (51%)
- Investment in automation of the customer process (IT) (13%)
- Marketing and other (36%)

Financial terms of the crowdfunding

- Type of financing: Subordinated Convertible Loan
- Interest: 6% annually (paid per quarter)
- Duration: 5 years
- Repayment: Upon exit
- Subordination: Subordinated to bank finance

Below is explained how the convertible loan works:

1. Conversion to depositary receipts of shares will be offered if a new investor invests more than €200,000 in newly issued shares or buys more than 50% of the existing shares. If a new investor is not found, the crowd will receive a conversion offer after 3 years based on the fair market valuation of the underlying shares, as valued by an independent, qualified, registered valuator.

2. The conversion offer will include a discount on the depositary receipt (of share) price of: 0% if conversion is offered within 2 months, 15% if conversion is offered within 1 year and 30% if conversion is offered between year 1 and year 3.

3. After conversion, the crowd will be a co-owner of Solease (via a trust office foundation). A return on the investment is gained through yearly dividends and/or a one-off payment upon the sale of the company (exit).

Key elements of the Due Diligence process

The following aspects and contracts were assessed by Oneplanetcrowd during due diligence:

- Company and Project exploitation plan
- Financial plan, forecasted P&L, balance sheet and cash flow statement
- P&L of last 2 years
- Relevant permits
- Engineering, Procurement, Construction contract
- Operations & Maintenance contract
- Finance agreements of key financiers
- Ownership structure overview
- Insurance contracts

Marketing Campaign Description

Oneplanetcrowd works closely together with the project developer before and during the campaign. In general, the campaign plan is rolled out 'from inside to outside', meaning from close relations of the company, to the crowd of Oneplanetcrowd, to the customers of Solease, eventually to relevant blogs and (social) media. The idea behind this is that the first investors that can be convinced are the ones that know the company already. Once they are 'in', and the teller of the campaign is running, it will convince others that are less familiar with the company. These people will never be the first ones to invest, hence the timing of reaching out to them is crucial. You need a project that is running well, thereby radiating 'success' and attracting attention from relevant media. They will eventually write about the company and will attract more new investors to the company. By following this method, a campaign realises its full potential and outreach. At the end of the campaign of Solease, €1m was successfully funded by 291 investors.

Lessons learned through doing project

The prospective client Solease was introduced to Oneplanetcrowd via Start Green Capital, the mother firm of Oneplanetcrowd. One of the Solease SPVs previously received finance from regional fund Energiefonds Overijssel, managed by Start Green Capital. Start Green's business analysts are responsible for the due diligence for each project listed on the Oneplanetcrowd platform. Since Start Green already carried out due diligence in regard to the finance from the Energiefonds, substantial time and costs were saved as this due diligence could be relied upon by Oneplanetcrowd too. The lesson learned here is that a platform can save considerable costs – and lead time - if the platform is part of a larger investment body that is active in the market as a financier, besides crowdfunding. An already existing acquisition process helps to get in new prospects and due diligence costs can be shared.

Practical experience applying the CrowdFundRES project guidelines

The case study was reviewed against the guidelines for renewable energy project developers and for crowdfunding platforms (see http://www.crowdfundres.eu/results/). The main findings are shared below, following the order of topics of the guidelines.

Guidelines for RES Project Developers

'What should developers ask themselves?'

The questions listed in this section are relevant and useful. They provide guidance to the project developer in deciding and preparing for crowdfunding. A suggestion for improvement:

The answer to the question 'Do I understand that crowdfunding will require me to make certain business information public?' can be moved to section 2 (questions to platforms) and extended to become a bit more practical for the reader. For example, by adding: 'In order to see the level of information to be shared on a project and its project owner, one can go to the potential platforms and view the current and past projects and their info as examples. Most platforms do request a list of due diligence documents for them to analyse the quality of the project but do not require all of

them to be presented to the investors. In short it is advisable to check beforehand the list of required due diligence documents, compared to the final documentation presented on the public platform.

'What questions should project developers ask platforms?'

While using the questions we came up with a few suggestions for improvement:

Under, 'what is the background and experience of the crowdfunding platform?' the suggestion may be added to do an online sanity and reputation check by researching the platform company and its founders (google, social media).

Add question 'What is the lead time from application until the capital is in my bank account?'. Project developers are particularly interested in the time cost of securing the funding. As crowdfunding is typically faster than conventional types of finance, it would be wise to add info on this, but sometimes developers are not fully aware of the time it takes to carry out the due dillagence, there is a perception that a project can simply be loaded on to a platform for funding.

The lead time will depend on the fund raise target and scale of the platform's community but on average, it takes 3 to 12 weeks from application until going live on the platform, 2 to 8 weeks campaigning time and 1 to 2 weeks finalisation and transfer of the funding. Ask the platform about the lead time of their process.

Regarding 'What information does the crowdfunding platform require of the project developer?': it would be a good suggestion to clearly distinguish the question on information required for due diligence and information required to be made public to the crowd. Regarding the latter, see the suggestion above to advise project developers to check how previous projects are presented on the platform. Regarding information required for due diligence: it may be wise to add an example list such as the list above under 'key elements of due diligence'.

'Case studies'

It is very useful for project developers to read about past examples. The information gives a concise picture of the projects. It may be helpful to the project developers if they can read a little more about the steps and timing of the process from application to *go live* (the preparation phase).

Guidelines for Crowdfunding Platforms

These guidelines are written for those platforms that are new or that are expanding their offering towards project finance. Although it was less applicable to the situation of Oneplanetcrowd, Oneplanetcrowd used their experience to imagine what information a new player would appreciate in this document. While applying the guidelines, a few improvements were identified, these are as follows:

'The Crowd'

Some points of advice to be added to the answer of, 'what are the setup costs of getting enough crowd investors to finance the first projects on a new platform?':

A solution in case a new platform experiences a 'chicken and egg' problem before going live: start with a good project, preferably with potential to attract media. The first project attracts the first investors. With this project, a platform sets the tone for the platform and expectation of the type of projects people can expect in the future.

A platform's first investors will most likely be people that you met in person. Make sure you meet as many of your targeted investors as possible before going live. Organise offline presentations/meetups with them.

Before going live, reach out to the targeted groups of investors as much as possible and bring the first project propositions to their attention. Use their feedback and make sure to collect their email addresses to reach out to them once it goes live on your platform. Make them feel special: promise them to be the first ones to get access. These actions enable you to build a group of your first-time investors that will kick-start your first project and your platform. Focus on investors with a large social network. Encourage them to share and shout about your platform online, to leverage their network.

'Projects'

Under, 'what is the due diligence process?' the commitment of other financiers may be added: If another financier is already committed to the project, it shows that this party already performed due diligence. As a platform, you can of course take this as a quality asset for the project and you may even benefit from a comprehensive set of documents collected and analysed by that party.

'IT'

In the guidelines, in-house solutions are explicitly preferred over white label IT solutions. Perhaps that is put a bit too simply. Of course, it is preferred to own and control your IT configuration and your database. However, we have learned that it is a good idea to build your IT modularly and to integrate external components: white-label services or 'Software as a Service (SaaS)'. There are many suppliers of SaaS components delivering services to a large number of clients demanding high quality software. These can be other platforms but also other types of players. Maintaining software over time needs continuous investment, especially in extensive back end systems. Such systems can often be used in a SaaS structure where maintenance costs are actually shared by all users of the software. Make sure you own your own data and that you can always export all data from your SaaS suppliers to avoid a vendor lock-in.

'Legal'

Advice to be added for platforms: Make sure you work with a law firm that has experience advising crowdfunding platforms – currently operational - on getting the right papers and creating quality contractual documents for the project owners and investors.

3. Project: Saint-Varentais Wind Park

Platform: Lumo

https://www.lumo-france.com/projets/saint-varentais

Background: How the project was sourced

The project was sourced through French RES developer Valorem. Valorem is a vertically-integrated green energy operator**,** offering a range of renewable energy solutions while guiding and supporting local authorities and its partners at every stage of a project**:** surveys, development, financing, construction, operational oversight and maintenance.

The idea of running a crowdfunding campaign appeared very early in the discussion between Valorem and the villages (Saint-Varent and Saint-Généroux) involved in the project. Both villages are part of the 'Communauté de communes du Thouarsais' (i.e. Thouars Metropole) which is in favour of crowdfunding and has known Lumo for several years. It therefore made sense for all stakeholders to work together on this project. Valorem, Thouars Metropole and Lumo are all members of the TEPOS network aiming to develop 'Clean Energy exporter counties'. Valorem and Lumo are both members of CrowdFundRES. This crowdfunding campaign was the second one that Valorem raised via Lumo.

Project description

Technology type

The project in which Lumo and Valorem worked together, involved a wind farm to be built in the French county of Saint-Varentais. The project is in development so had not secured development consent at the time of the crowdfund.

The wind farm is expected to be between 8 and 12 wind turbines, each of them with 3MW capacity. So, the total capacity could be between 24MW and 36MW, and the average annual production between 72,000,000kWh and 92,000,000kWh of clean energy. This represents the annual consumption (without heat) of between 26,000 and 34,000 households.

Company structure:

The Saint-Varentais project was the first crowdfunding campaign in which Lumo issued a bond for a wind project without a building permit. This was made possible due to proper structuring of the transaction.

As the SPV created to carry the wind project had no assets (no building permit), the issuer was Valorem SAS itself. As the sponsor of the wind farm, Valorem will guaranty the repayment of the bonds, even if the wind park is not build, and therefore produces no electricity and has no revenues.

Financing structure, key terms of crowdfunding investment and use of funds:

The €50k raised by Valorem was to pay for the next studies needed to make the project pass the next development step.

To give a 'priority to proximity', the crowdfunding campaign was only open to local investors for the first 6 weeks. The interest rate of the bond was 7% for them. After this period, the bond was open to all the neighbouring counties of the project, but the investors then only received a 5% interest rate on their bond.

This scheme was inspired by the brand-new regulation in France for RFP (Request For Proposal).

To be able to sell electricity at a premium, RES developers will have to prove they sold some crowdfunding product to a crowd living in the county where the project is built, and the neighbouring counties.

It was interesting for Valorem and Lumo to 'rehearse' this scheme a few months before its implementation.

As said earlier, the same financial product (corporate bond) was proposed to the investors but with two different interest rates.

The financial terms of the Saint-Varentais project are:

- Type of financing: Corporate Bond
- Interest: 7% for Local (Thouars Metropole)
  5% for nearby counties (Départements) (1)
- Duration: 2 years
- Repayment: 4 semi-annual payments (every 6 months) of the same amount
- Guarantee: Valorem SAS

(1) Deux Sèvre, Vienne, Charente, Charente Maritime, Vendéeet Maine & Loire.

Key elements of the Due Diligence process:

The Due Diligence process was only focused on 'Valorem SAS' and not on the SPV for the project.

The analysis focused on the cash flow of Valorem over the next two years.

Marketing Campaign Description

As usual, this project was promoted by Lumo and Valorem via multiple channels. The most important channel was on the ground events. The Thouars Metropole organized a press conference on September 5th, then Valorem and Lumo held a stand for 3 days at a local fair around the weekend of September 16th & 17th. Along with social media outlets on which these platforms are active, the project was promoted through various newsletters as well as a regional press release.

In total, 36 investors invested in the 'St Varentais' for a total of €50.000:

- 19 of them came from the first circle of investors, they invested a total of €30,225
- 17 of them are living in the counties of the 'second circle', they invested a total of €19,775

If we translate in percentage:

- First circle - 52.8% of the total investor base contributed for 60.5 % of the amount
- Second circle - the other 47.2% contributed for 39.5% of the amount.

A common metric Lumo witnesses on most of its projects is that the closer the investor lives to the project, the higher the amount they invest.

Another interesting fact is that out of the €30,225 invested by the first circle, €24,525 used a coupon given at the local fair. This means 81% of this business flow could be traced to one marketing activity.

Lessons learned through doing project

Valorem and Lumo were able to successfully raise the targeted amount of money at the development stage of the project lifecycle which was positive and within with the constraints of the conditions of the next wind RFP, i.e. that money is sourced from local investors. But in order to secure the incentive in the real RFP in 2018, a project this size would have to raise around €1m.

Practical Experience applying the CrowdFundRES project guidelines

The case study was reviewed against the guidelines for renewable energy project developers and for crowdfunding platforms (see http://www.crowdfundres.eu/results/). The main findings are shared below.

Additional detail could be added to the question "Do you have an obligation or a desire to engage with a local community for local planning support, and/or sharing of potential benefits from a project?" Additional information could be used to reinforce the potential of crowdfunding for early engagement of local investors as demonstrated by this project:

Community engagement is commonly recommended (or required) for renewable energy project approval by local planning authorities. Payment or donation of benefits to an impacted community is also suggested / mandated in some countries. Crowdfunding has demonstrated its ability to attract community investment for renewable energy projects and encourage a positive engagement process.

4. Project: Atlantis Resources

Platform: Abundance

https://www.abundanceinvestment.com/projects/atlantis-ocean-energy

Background: How the project was sourced

Abundance met Atlantis Resources at a conference initially, however the introduction that led to the project going ahead was from an introducer.

Project description

Technology type

Atlantis Resources is a leading tidal energy company that developed the world's first sea bed installed tidal stream plant, located in the Pentland Firth, North East Scotland.

Abundance provided working capital to help Atlantis develop future projects within the UK and across the globe.

Company structure

A new company wholly owned by Atlantis was formed to raise the capital. This was done for a number of reasons but primarily to stay within the €5m exemption from the prospectus directive. The parent company had raised capital within the previous 12 months and therefore subsequent investment rounds would require it to prepare a full prospectus, it was decided that the cost and time required to issue a full prospectus would be inefficient and therefore a separate company was formed to raise the finance.

Finance Structure

The company was formed as an unlisted public limited company and was 100% debt financed by Abundance investors. The funds raised were then passed up to the Atlantis parent company. There was a parent guarantee in place to cover the interest and capital repayment.

Key Terms of crowdfunding investment

The investment had the following key terms:

- £5,000,000
- 7-year term period
- 8% interest rate
- Bullet repayment
- Secured against generating asset
- Parental guarantee

Use of funds

The funds were raised to support Atlantis Resources develop future tidal stream sites in the UK, Singapore, France and Canada.

Key elements of the Due Diligence process

The project due diligence followed the standard Abundance process, where the due diligence is carried out in house covering commercial, technical and corporate due diligence.

With the crowdfunding providing working capital rather than project finance, the commercial due diligence focused on the viability of Atlantis' existing project as well as the viability of their proposed future projects. The plan was that the debenture would be repaid from the revenues from the existing and future tidal stream projects, in the event that Atlantis did not convert any of the target future projects into generating assets the debenture was structured so that it would be repaid via the sale of the company's existing project in the Pentland Firth.

Marketing Campaign Description

The raise was more successful than anticipated, with the raise completed within 23 days. We believe the success of the raise was largely down to the innovative nature of Atlantis Resources, many of the Abundance customers are renewable energy enthusiasts and therefore they were excited by the opportunity to buy into a tidal stream company for the first time.

- Atlantis Debenture 1:
  - Number of investors: 1,297
  - Days investment open: 23
- Atlantis Debenture 2:
  - Number of investors: 5

Lessons learned through doing project

The client wanted to raise a total of £5m, this caused challenges managing the exemption from the prospectus directive. The exemption limit from the Prospectus Directive in the UK is €5m, which meant that under current euro conversion rates we could only raise £4.3m in one offer, however our lawyers advised us that we could combine different exemptions to the Prospectus Directive. We therefore created a second offer where the minimum investment amount was €100,000 utilising a second exemption, which thereby allowed us to raise the remaining £700,000 from our wealthier individual investors and institutional investors.

The reason for wanting to avoid issuing a full prospectus for an offer of £5m is that there is significant extra cost in preparing a prospectus and critically the document needs to be signed off by the FCA. Combined, this means the time it takes to issue the document and raise the capital increases, while the costs also increase making the overall cost of capital higher. We also do not believe that the extra costs create any additional value for the borrower or investor. In crowdfunding investor protection comes from the platform building and maintaining a good

reputation with its investor clients and therefore structuring and delivering investments to their crowd where the risks are clearly identified and understandable by ordinary retail investors.

Practical Experience applying the CrowdFundRES project guidelines

The case study was reviewed against the guidelines for renewable energy project developers and for crowdfunding platforms (see http://www.crowdfundres.eu/results/). The main findings are shared below, following the order of topics of the guidelines.

Guidance for platforms

Atlantis Resources demonstrated that it is possible for listed companies to crowdfund finance and that crowdfunding is not just for the smaller unlisted end of the business community. Atlantis chose to use crowdfunding to raise additional debt finance for a number of reasons, first the cost of crowdfunding finance was attractive, the cost of listing a bond on a crowdfunding platform as an alternative to a traditional listing was less and finally crowdfunding offered the opportunity to engage the general public.

Working with listed companies does bring a need to enhance internal systems and controls, for instance how to process and handle market sensitive information. To ensure that there was no leakage of information linked to the imminent capital raise we used a code word for the project internally and limited the number of people within Abundance who knew the real identity of the client ahead of the project going live.

Guidelines for RES Project Developers

'What should developers ask themselves?'

The questions listed in this section are relevant and useful. They provide guidance to the project developer in deciding and preparing for crowdfunding. A suggestion for improvement:

The answer to the question, 'Do I understand that crowdfunding will require me to make certain business information public?' can be extended to become a bit more practical for the reader. This issue was particularly pertinent for Atlantis as the issue was complicated by the fact that the information and timing of the release of the information we normally require for ongoing communication conflicted with the information that Atlantis was expected to provide to the public market. We therefore had to create new process for dealing with the release of information but have demonstrated that companies can work simultaneously with public and crowdfunding security listings.

5. Project: Upper Pitforthie WindGen

Platform: Abundance

https://www.abundanceinvestment.com/projects/upper-pitforthie-windgen-debenture-2

Background: How project was sourced

The project was sourced via business contacts.

Project description

Technology type

The project is a 0.5MW wind turbine, which secured one of the last of the UK Feed in Tariff contracts in 2016.

Company structure

The company is a stand-alone project company, it holds the wind turbine and the associated contracts.

Finance Structure

The CAPEX cost was 100% debt funded by an Abundance arranged Debenture. The debenture is a variable rate debenture returning a percentage of operating profit. This means the project can be heavily geared but avoid default risk in periods of low wind or if it faces maintenance issues.

Key Terms of crowdfunding investment

- £2.3m
- 19-year project finance bond
- secured against the assets of the company
- 8% interest rate
- 6 monthly interest payments

Use of funds

The project was built using funding sourced via Abundance in the form of a construction bond. A 1 year, 12% interest, bullet repayment instrument that was raised to fund the construction in 2015. The instrument referenced in this case study therefore refinanced the construction bond with a project finance bond. This was the first case of us completing funding the full project lifecycle.

Key elements of the due diligence process

The project due diligence followed the standard Abundance process, where the due diligence is carried out in-house covering commercial, technical and corporate DD.

'Anything unusual that cropped up in DD process, how was this dealt with?'

The project could not export all its power to the grid in the first years, due to constraints on the grid. Therefore, the project was funded on the basis that a wood chip drying business would also be established which would take a proportion of the power from the turbine to power the dryers. This unique feature of the project made the project unattractive to conventional funders but we were able to put in place bespoke mitigants to manage the risk and therefore get comfortable with funding the project.

Marketing Campaign Description

This project was a first of a kind for Abundance as it was the first project where we refinanced a bond we had already arranged. The bond covered in this case study was a long-term project finance bond which refinanced a one year construction bond which had previously been raised through the platform. We created a new process for this second offer to enable clients who had invested in the construction bond to roll part or all of their investment over into the new project finance bond. Roughly a third of the capital in the project finance bond was rolled over capital from the construction bond.

- Number of investors: 605
- Days taken to raise the finance: 14 days

Lessons learned through doing project

This was one of the first projects where we took a formal Agency role, due to the high-risk nature of the project we created a more formal agency role in order that we could step in and help resolve problems on behalf of investors in the event that something went wrong with the investment.

Practical Experience applying the CrowdFundRES project guidelines

The case study was reviewed against the guidelines for renewable energy project developers and for crowdfunding platforms (see http://www.crowdfundres.eu/results/). The main findings are shared below.

1. Lifecycle capital: traditional investors are often restricted in the type of capital they can provide specialising in one phase of the capital life cycle for instance construction or project finance. This is often due to the fact that they raise capital from one or two sources on specific mandates. On a crowdfunding platform with a much more diverse community of investors it is easier to provide capital across a project's lifecycle. Investors on the platform enjoy seeing a project progress and assigning the money at different stages of the risk curve. While for project developers they can efficiently move projects in to cheaper capital as risk is taken out of the project. References to this broader approach in the developer guidelines could be of use.
2. Acting as Agent: prior to UPW we had not acted as agent for a project. Acting as agent means we can co-ordinate and act for investors in the case that something goes wrong with a

project and issues need to be resolved. We had been reluctant to take this position in earlier projects due to the liability it entails, however as we have become more experienced this extra control is becoming increasingly important for managing reputational risk.

French crowdfunding platforms have had to take on an agency role since the launch of French crowdfunding rules. Abundance have instigated this change on a voluntary basis seeing the value in the approach. This combined experience should perhaps be introduced to the platform guidelines and feed into any future attempts to harmonise crowdfunding rules across Europe. In addition, adding this recommendation as guidance within the platform guidelines is advisable.

6. Project: Monnow Valley CHP

Platform: Abundance

https://www.abundanceinvestment.com/projects/monnow-valley-chp

Background: How project was sourced

The project was originally sourced via business contacts; however, Abundance had already funded one project belonging to the developer so this project was repeat business for the platform.

Project description

Technology type

Monnow Valley CHP operates a fleet of CHP boilers on a business park which supply heat and power to the offices.

Company structure

The company is a stand-alone project company. It holds the development rights for the project, carries out the construction work and ultimately operates the CHP plant at the end of the construction period.

Finance Structure

There are two layers of finance in the company, equity supplied by the developer with 100% of the debt supplied by Abundance investors.

In December 2016 Abundance provided construction finance with the bond terms below, the intention is that in January 2018 this construction bond will be refinanced with a long-term project finance bond also raised on the Abundance platform.

Key Terms of crowdfunding investment

- £4m
- 1 year construction bond
- Secured against assets of the company
- 12% interest rate
- 6 monthly interest payments

Use of funds

The funds were used to purchase and install the CHP units and establish the operating company.

Key elements of the due diligence process

The project due diligence followed the standard Abundance process, where the due diligence is carried out in-house covering commercial, technical and corporate DD. There was nothing unusual that came to light during the due diligence period.

Marketing Campaign Description

Normally we avoid launching projects during holiday periods due to a fear that investors will be distracted. However due to the need to get the project funded so that it could hit its construction timeline we launched the project in mid-December. We were pleasantly surprised that the project was funded rapidly.

- Number of investors: 853
- Days taken to raise the finance: 11 days

Lessons learned through doing project

This was one of the first projects where we took a formal Agency role, due to the high-risk nature of the project we created a more formal agency role in order that we could step in and help resolve problems on behalf of investors in the event that something went wrong with the investment.

Practical Experience applying the CrowdFundRES project guidelines

The case study was reviewed against the guidelines for renewable energy project developers and for crowdfunding platforms (see http://www.crowdfundres.eu/results/). The main findings are shared below.

1. Monnow Valley is a good example of a project where crowdfunding was able to offer value by offering a bespoke funding arrangement creating a solution where traditional finance found it hard to play due to the unique and innovative nature of the project. Crowdfunding was also able to provide a full lifecycle solution with a construction bond issued but with the refinance of the construction bond via a project bond also occurring on the Abundance platform. In the traditional world, often borrowers have to go to different debt providers to finance different stages of a project this can increase costs.
2. Monnow Valley CHP was interesting in that it was a relatively high-risk project which still sold out in record time. Reflecting on the reasons why, we believe this is down to the project being tangible, with an interesting story and a project where the risks are easy to understand. For developers thinking of crowdfunding or platforms thinking of hosting a raise, ensuring there is a strong story behind the project and that the project risks are easily understood should be key considerations before deciding to proceed.
   For platforms, we would recommend expanding the platform remit beyond simply the raising of finance to ensure that the platforms have a strong legal basis for stepping into help fix problems with investments if they occur. As we move into higher risk project areas this is something that we are finding increasingly reassuring to have in place.

7. Project: Thrive Renewable Energy Bond

Platform: Abundance

https://www.abundanceinvestment.com/projects/thrive-renewables

Background: How project was sourced

The project was sourced through networks and existing relationships with both Thrive Renewables and Triodos Bank, the corporate financier responsible for the project due diligence.

Thrive is a renewable energy company with an expressed aim of running itself as a community owned company with the mission of promoting the development of renewable energy. It defines community as a community of interest not geography.

Project description

Technology type

Thrive are an asset owner of multiple types of renewables including onshore wind and solar as well as hydro.

Company structure

The company financed was the holding company which develops and/or buys in new assets to the group.

Finance Structure

Thrive Renewables is primarily equity financed, it has raised, over a series of rounds, equity from retail investors. Thrive Renewables bond was the first retail bond the company had raised into its top company, it was also the largest bond we had listed on our platform.

Key Terms of crowdfunding investment

- £10,000,000
- 7-year corporate bond
- Unsecured
- Covenants governing additional debt the company can take on
- 5% interest rate
- 12 monthly interest payments

Use of funds

The funds were raised to purchase renewable energy plans to bring into the group.

Key elements of the due diligence process

The bond was structured and the offer document created by Triodos Bank Corporate Finance team, we therefore did not carry out our normal due diligence process. Triodos are a regulated firm, they therefore provided us with a letter of assurance which enabled us to rely on their due diligence. Though we did not carry out our full due diligence we did conduct some specific checks to reassure ourselves that Triodos had carried out their role correctly, but this was far less intensive than our normal process.

This was the first time we had allowed a third party to list a bond on our platform.

Marketing Campaign Description

Triodos and Thrive Renewables took the lead on the marketing of the Bond, sending communications out to their collective communities. This drove a new set of investors to our platform. These investors purchased the Thrive bond but some also purchased the bonds we had structured.

We also marketed the Thrive bond to our community of investors directly and a high proportion of our investors converted into the Thrive bond.

- Thrive Renewables Debenture 1:
  - Number of investors: 934
  - Days investment open: 22
- Thrive Renewables Debenture 2:
  - Number of investors: 13
  - Days investment open: 112

We introduced a paper based application process for the Thrive Bond, as some of Thrive's existing investors had a strong preference for paper. It was an interesting test case of the efficieny in terms of time and cost of paper alongside a purely electronic process. In the end only 6 of the 935 investors in the Thrive bond applied using the paper based process.

Lessons learned through doing project

Thrive listed the bond on Abundance to enable it to become ISA-eligible and be held in an Individual Savings Account which enabled investors to earn a tax-free return. Triodos Renewables were the corporate finance house which structured the bond for Thrive, this was the first bond we had listed where we had not structured the instrument.

The process worked well from our perspective, to make the bond eligible to be listed on our platform and purchasable within an ISA we had to introduce additional terms into the template Triodos bond deed. However, these were accepted without any complaints.

Triodos and Thrive both have large communities of investors so we also benefited from recruiting new investors because both Thrive and Triodos pushed their investors to our platform.

Practical Experience applying the CrowdFundRES project guidelines

The case study was reviewed against the guidelines for renewable energy project developers and for crowdfunding platforms (see http://www.crowdfundres.eu/results/). The main findings are shared below.

For platforms entering the market working with a third party corporate finance firm who structure and prepare the investment for listing can offer a route to scale and increase the deal flow. However, with the platform's reputation dependent on the quality of the investments it is imperative that the partners are high quality and ideally compensated for the long-term success of the investment not just for the delivery of the investment on to the platform.

Working with partners with established communities of investors is also a powerful way of rapidly growing a platform's investor base. So again, if partnerships are to be forged considering the value of the partners community alongside the transaction can be important, growing an investor base for "free" can be more valuable than a cash payment.

8. Project: Combined Heat and Power (CHP) in a school in Berlin

Platform: bettervest/Green Crowding

https://www.bettervest.com/de/projekt/nahwaermenetz_wilhelmstadt_gymnasium_berlin_II

Background: How project was sourced

The energy efficiency project concerns the replacement of fossil oil-based heating by two combined heat and power (CHP) units in Berlin, Germany. Total energy savings are around 37.07%, leading to an approximate of 270.62 CO2 tons savings each year. The 84,000m2 school complex consists of 18 buildings of different age and architectural style supplied with heat and electricity. 9 buidlings are used by the owner (TÜDESB) for educational purposes. The other buildings are commercial businesses that are rented.

The project was sourced through the contractor EDEC ED-ENERGY Contracting GmbH. The company is specialised in the development, financing, installation and maintenance of photovoltaic, energy storage systems, cogeneration units as well as combined heat and power units.

Project description

Technology type

Previously, the school complex was heated via two oil-based 2,900kW boilers. The installed system components and corresponding heat network were over 25 years old and highly inefficient. Power was purchased from a regular utility company.

The heating oil system has been replaced by two CHP units that cover the baseload heat and power demand of the school complex and tenants on the property. The modular CHP units from the supplier Bosch have an electric capacity of 50 kW and thermal capacity of 78kW. Total efficiency approximates to 87.7%.

The newly installed CHP units bear enormous savings potential, both in terms of energy and money. Switching from oil to gas brings enormous CO2 savings potential, which will be further enhanced by the integration of cogeneration units. Now, less energy is needed to produce the same amount of heat. Electricity is mostly supplied by the CHP units. The off-grid solution also eases the load on the grid. Overall energy savings are 37.07% compared to the previous situation. Total CO2 savings average 270.62 tons each year.

In monetary terms, sunk investments are offset by lower energy costs, guaranteeing cost neutrality over the contracting period.

Company structure

TÜDESB, the owner of the buildings supplied with heat and power, signed a contracting agreement with EDEC ED-ENERGY Contracting GmbH. The contractor is specialised in the development of projects, financing and the installation and activation of photovoltaic, energy storage systems and cogeneration units as well as combined heat and power plants. Over a contract period of 14 years, the contractor will supply heat and electricity to TÜDESB. In return, the customer will pay a consumption-based fee for the supply of electricity and heat as well as a base price for the provision of the heat-generating plant, which includes the usual costs such as debt service, maintenance, repair, monitoring, and other factors. The legal set up enables TÜDESB to focus on its core activities whilst implementing efficiency measures in a professional manner.

Financing structure, key terms of crowdfunding investment and use of funds

The financial terms of the project were as follows:

- Type of financing: Subordinated Loan
- Interest: 6% annually
- Duration: 8 years
- Repayment: Annuity

The total financing was split into two parts. Total needs of the first round late-2016 were €600,350. €418,150 were raised via bettervest, surpassing the minimum target. The missing sum was initially provided by the project owner from its own funds. Thus, the hardware could be installed on time and efficiency savings gained early on. Due to newly sparked interest from the crowd, the project owner decided to raise the remaining €182,200 in a second campaign mid-2017. The majority of the energy efficiency systems were already installed and running by the time of the second crowdfunding campaign. Thus, operational risks were limited.

Total investment costs for all measures were €810,000. Own equity from the project owner was provided in addition to the crowdfunding loans. This implies that own equity approximated 30%.

Key elements of the Due Diligence process

bettervest's due diligence process consisted of an in-depth technical and financial assessment of the underlying risks. In the process, an independent energy consultant report on the technical and economic viability of the project was a requirement. For this project, the independent energy consultancy Ingenieurdienstleistungen IDL Dipl.-Ing. Stefan Scherz reported on the technical and economic benefits of the project. The report is structured along five lines:

1. Status quo energy systems, energy consumption, CO2 emmission and associated costs
2. Project idea, technical implementation
3. Potential energy savings in terms of heat and power, associated energy and CO2 savings
4. All associated costs of the project, hardware, insurance, installation, maintenance etc. Cost calculations of the contracting party, cost and benefit calculations of the owner TÜDESB
5. Cost-benefit analyses

During the due diligence process, project owners had to provide the following pieces of information among others:

- General information
  - Description of project and intended use of funds
  - Statement of motivation to be financed by bettervest
  - Are there any conflicts of interest?
- Financial information
  - Shareholder Agreement, in case of a Limited Liability
  - Company (LLC), a list of shareholders
  - Copies of identification documents of all authorised representatives
  - Financial plan
  - Balance Sheets of the past three years
  - Rental contract
  - Contracting documents
  - Credit rating (e.g. a CreditReform assessment)
- Technical information
  - Size and type of the current system
  - Product data sheets
  - The energy consumption of the current system
  - Full maintenance contracts including prices

Investors have access to an array of technical information, most noteworthy are the energy consultant reports, installation offers, data sheets of used products as well as a detailed description of the project itself. With regards to financial data, the investors have access to annual accounts of the borrower, the credit rating report of the company published by the leading German solvency rating company “Creditreform” as well as the “investment information sheet”, a document requested by German law, which is also deposited at the “BaFin” (the German financial conduct authority). In addition, pictures and videos about the project and the project owner are available on the platform.

Investors can see all investments and important data such as tax information and accrued interest upon logging in to their bettervest account. Additionally, investors can ask questions via mail, Facebook or telephone and get support in the event of any problems that arise with the project owner.

The borrower provides regular financial and technical updates. Financial filings and audit reports are assessed as well as independent credit ratings of the borrower. Repayments are closely monitored. Over the life-span of the loan, data and independent reports on technical implementation and energy consumption are evaluated as well as other key factors specific to the project.

Marketing Campaign Description

The total project size of €600.350 was the largest project crowdfunded on bettervest at the time. A total of €418.150 from 472 investors was raised after 121 days, thus the minimum target was reached. The funding was sufficient to launch the project. The missing sum was initially provided by the project owner from its own funds. Afterwards, there was renewed interest from the crowd, and another campaign was launched several months later. It raised €182.200 from 237 investors in 81 days.

Important marketing channels in the promotion of the project were bettervest's website and social media. Newsletters described the project in greater detail. There was also a local event taking place at the school involving teachers, parents and tenants. The second campaign raised funds in a shorter period of time with less marketing efforts.

Lessons learned

An important lesson relates to a clear definition of minimum funding levels in crowdfunding campaigns. Technical implementation dates must be met in energy efficiency projects in order to fullfill financial obligations. In this particular project, the minimum funding sum was raised the first time around. Hence, the project owner could provide the additional funds and the project was implemented on time. The project size was notably larger than other projects on bettervest at the time. Thus, it took longer to raise the necessary funds. By defining a minimum funding level, the project owner could act accordingly when the full amount was not raised. Yet, the crowd had a continued interest in the project. As a result, a second campaign successfully raised more funds.

bettervest also learnt that it is important to communicate contracting arrangements in a clear and transparent manner. Many energy efficiency projects have contracting arrangements. The legal arrangement, obligations, responsibilities and financial roles are decisive factors for the underlying financial risk.

Practical Experience applying the CrowdFundRES project guidelines

The application of the guidelines for renewable energy project developers and crowdfunding platforms (see http://www.crowdfundres.eu/results/) led to the following conclusions.

Guidelines for RES Project Developers

'What should developers ask themselves?'

The questions enable project developers to make more informed decisions.

'What type of financing am I considering?' was an important question in the case study. The business plan must closely define the financial needs for different developement stages. When a minimum funding volume is defined, the project developer must know how to source funds differently without putting a timely implementation at risk.

The question, '*Do I have an obligation or a desire to engage with a local community for local planning support, and/or sharing of potential benefits from a project?*' was also relevant in the project. The local event and targeted marketing contributed to the success of the campaign.

Implementing a crowdfunding campaign is time-consuming, particularly the first time. If project developers have more projects in their portfolio, costs are lower and benefits higher. Here, crowdfunding can be used strategically to diversify financial sources.

'What questions should project developers ask platforms?'

The question, 'What is the success rate in meeting funding goals?' Goals can be measured in both timeframe and amount was particularly relevant. The financial plan should include three scenarios: 1) the full amount is crowdfunded 2) the minimum target is reached and 3) the minimum target is not reached.

All estimates of costs related to crowdfunding should also consider time and efforts in promoting the project, i.e. responding to investors and travelling to local events. In crowdfunding, investors appreciate knowing the people behind the project. Thus, the CEO must be willing to meet and talk to investors.

Guidelines for Crowdfunding Platforms

The guidelines are useful in estimating the underlying work of running a successful crowdfunding business. In this particular project, some additional insights can be added.

'The Crowd'

Since bettervest is already an established platform, the question '*how do I promote a crowdfunding campaign?*' is most relevant. Communicating complex concepts like contracting arrangements for energy efficiency clearly requires time and efforts. For example, the crowd must clearly understand which party is the loan participant and its corresponding credit risk.

Follow-up work also involves a clear communication if there are any changes to the project. Early regular updates are always best.

'Projects'

The due diligence process should also have clear procedures in place in case of problems. For example, if there are delays in installation, they shall be tracked and communicated to the crowd. Operational difficulties can have a direct effect on the borrower's ability to repay its loan. Potential problems often happen at the beginning of projects.

Conclusions

Having tested the guidelines against real projects, the conclusion is that the guidelines provide a useful starting point for both developers and platforms looking to explore renewable energy crowdfunding. However, following the assessment process some small refinements were suggested and have been adopted in the final documents.

Key areas that were suggested for change were as follows:

Developers:

Consideration of the public release of information - a key consideration for developers raising capital via a crowdfunding platform is the level of transparency it wil bring to their business. There are often valid reasons why developers do not want transparency, for instance for commercial sensitivity reasons, and therefore it was suggested that a bit more detail should be added to the guidelines to alleviate any fears developers may have with regards to transparency.

How long does it take to receive funding from a crowdfund raise - it was felt following a review of the guidelines that it was important to give a bit more detail regarding timing. The platforms in the consortium discussed how developers are often surprised by how fast a platform can raise money, but also surprised at the lengh of time the due diligence process can take. Developers commonly think they can simply load their project on to the platform without any due diligence. It was therefore felt that adding additional detail to this section was important.

Platforms:

Choice of IT platform - a useful bit of feedback on the guidelines was for start-up platforms to consider white label solutions for their platforms when starting up. The platforms in the consortium built their platforms themselves as they were early movers in the market starting up at a time when white label solutions did not exist, because of this the guidelines had a bias towards the self-build approach. However, even since the first draft of guidelines were produced, the market for white label providers has expanded significantly providing a competitive option for new platforms entering the market.

Terminology - the testing of the guidelines also prompted discussion about how to describe a fundraise, this led to some suggestions on language that could be used by platforms to best describe a raise for instance using positive words such “finance” and “join” rather than terms like “help”.

More broadly it should be noted that the second set of case studies demonstrated how quickly crowdfunding is evolving and that the guidelines themselves risk becoming outdated quickly. The platforms in the consortium are continually innovating so they better meet the needs of their target markets but also in response to changes in government and European policy. The suite of case

studies generated for this report covering projects funded in 2017 highlighted a number of innovations, for instance:

- In the Torreilles Solar Park Project Lumo and Oneplanetcrowd showed that cross-border investment was attractive to investors, but the project also highlighted the regulatory barriers to cross-border activity.
- Lifecycle funding - Abundance demonstrated that a single platform could structure a series of investments into a single company to efficiently finance each stage of a project's development, specifically the construction and operation stages.
- Tidal energy - Abundance highlighted that wide ranging renewable energy technologies and companies are attractive as crowdfunding investments
- Local engagement with project development, Lumo and Valorem working together on the Saint-Varentais Wind Park highlighted that local communities can be engaged with a project via crowdfunding and that there is strong appetite for local investors to invest.

Overall the case studies highlighted the key strength of crowdfunding, which is that for an "investor" the platform is not governed by an investment or lending mandate in the way a fund or bank might be. Instead it can look at each project on a case by case basis and create the right finance solution for the project on the premise that it remains an appropriate investment for its "crowd". This makes crowdfunding a very agile new addition to the funding landscape, but one which also engages the public and brings transparency to project development. The guidelines draw this message out where appropriate and also provide useful sign posting for new platforms wanting to enter the RES crowdfunding sector.

Technical references

Project Acronym	**CrowdFundRES**
Project Title	Unleashing the potential of Crowdfunding for Financing Renewable Energy Projects
Project Coordinator	Silvia Caneva & Pablo Alonso Wirtschaft und Infrastruktur GmbH & Co Planungs-KG (WIP) silvia.caneva@wip-munich.de pablo.alonso@wip-munich.de
Project Duration	1st February 2015 – 31st January 2018 (36 months)

Deliverable No.	D4.1 Report on practical experience on using crowdfunding for funding RES projects
Dissemination level*	PU
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Lead beneficiary	Abundance
Contributing beneficiary/ies	LUMO, OPC, GC
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PU = Public
PP = Restricted to other programme participants (including the Commission Services)
RE = Restricted to a group specified by the consortium (including the Commission Services)
CO = Confidential, only for members of the consortium (including the Commission Services)

v	Date	Beneficiary	Author
1	25.08.217	Abundance Investment	Karl Harder
2	2.10.2017	Abundance Investment	Karl Harder
3	30.11.2017	Abundance Investment	Karl Harder
4	8.12.2017	Abundance Investment	Karl Harder
5	19.12.2017	WIP	Pablo Alonso, Silvia Caneva
6	10.01.2018	Abundance Investment	Karl Harder
7	15.01.2018	WIP	Pablo Alonso, Silvia Caneva

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