CROWDTHERMAL COMMUNITY FOR RENEWABLE ENERGY BEST PRACTICES IN EUROPE

GEORGIE FRIEDERICHS & RONALD KLEVERLAAN
CROWDFUNDINGHUB

CROWDTHERMAL

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EXPLANATION OF TERMS

PROJECT PHASE

Phase of development of a Geothermal energy project

The following project phases can be identified for geothermal projects:
1. Exploration phase, in this phase the feasibility of the project is determined
2. Permit fase, obtaining the necessary permits and licences
3. Drilling phase; (including testing of hole and potential energy delivery)
4. Building the infrastructure network to transport and use the generated energy

SPECIAL THANKS TO

Pim de Ridder directeur Windpark Nijmegen-Betuwe,
secretaris Wiek-II, the Netherlands

Christine Wevers, Director WVRS communiceert,
the Netherlands

mr Ryan Law, Managing Director of GEL,
United Kingdom

Dr Burghard Flieger, CEO of innova eG, CEO
of Solar-Bürger-Genossenschaft eG, and former
CEO Energie in Bürgerhand eG, Germany

Dr Michael Kraml, Senior Geologist / Geochemist,
GeoThermal Engineering GmbH, Germany

Nuri Palmada (board member) and
Lorena Quinones (finance manager)
of Somenergia, Spain

EXECUTIVE SUMMARY

Community finance can be a useful instrument to increase the success and social acceptance of geothermal projects. By involving the public in the project through community finance they can increase the financial base of the project. But more importantly, have a say in the development of the project and receive some of the benefits realised by the project.

There are several forms of community finance that can be interesting for a Geothermal project. Which form of community finance is the best to use depends on the social, environmental, risk and financial aspects of a specific project.

To first step on the journey of deciding which form of community finance is best suited to a specific project is to learn more about the different forms of community finance available. This report aims to give an overview of different possibilities by describing some best practices and the lessons learned from these best practices. It contains some of the best practices of community finance used in other sustainable energy projects in Europe.

The examples have been selected according to following criteria (in order of importance):

- Does the project use a form of community finance that can be used in a geothermal project?
- Is there a useful lesson to be learned from the successful (or unsuccessful) use of community finance in the project?
- Do the examples cover situations suitable for the phases of geothermal projects that are most suitable for community finance?
- Would the form of community finance used be applicable in one or more of the case study countries in the Crowdthermal project?

For each best practice the report contains a short description of the history of the project. Next to this a number of key elements are listed so the relevant best practice can be selected quickly by the reader. These key elements are:

- The type of sustainable energy produced (or planned)
- The goal of the project (what is it building/realising)
- If it is a geothermal project, then what project phase is community funding used?
- What kind of community funding is used?
- If known, what is the total amount financed by the community (crowd)?
- What financing was used for the exploration and permit phase? As these seem to be phases that can be hard to find finance for.

Finally, for each best practice there is a description of what the lessons learned in this specific project actually are and what bottlenecks were encountered in the project. Bottlenecks are equally important as they can make or break the success of the community financing.

Important lessons learned from the best practices described are:

- Focus on the impact of the project (sustainable energy) and not on the financial return will increase the commitment of the community.
- Building a community first can make the financing more successful.
- Start with a small involved community and if that is successful increase the target group for investment.
- Using a cooperative that invests in more than one project can be a good way to spread the risk for community investors.
- If possible, involve potential users in developing the project and financing it. They will remain committed.
- Using equity or reward-based community funding increases commitment and makes it more feasible for the project to manage risk and realize expected rewards.
- It is essential to check regulation before you start gathering community finance
- Use a professional crowdfunding platform for a crowdfunding campaign
- Let a cooperative and a commercial unit work together to realize the benefit of both entity forms and decrease the risk for community investors
- Involving government funds can give leverage for other funding sources
- Create ambassadors for your project.
- Use a locally supported goal which can be realised with sustainable energy, like a swimming pool, to increase commitment.

Some of the bottlenecks encountered where:

- Regulation (crowdfunding or other) limiting the possibility to raise funding and limiting the amount of funding possible through the community.
- Difficulty in keeping the community involved beyond an investors role in the longer term.
- Difficulty to reach the whole community, all age groups and all social groups.
- Difficulty to reach local commitment and acceptance through investing. Social outreach and the local spending by the workforce were actually more effective in increasing commitment in some projects.
- If small loan size is used not enough investors can be reached to raise the required capital.
- The strict requirements of government loans or guarantees that cannot always be met.

THE NETHERLANDS
KOEKOEKSPOLDER (ZWOLLE)
FIRST PHASE

PROJECT
Close to the city of Kampen, in a rural area called the Koekoekspolder, in the Netherlands a group of 3 professional gardeners wanted to use sustainable energy for the heating of their greenhouses. Together with the local government and the province they started the geothermal project. Two drilling holes were realised (1950 metres and 1924 metres) generating around 7.4 MW (water 73 degrees celsius). The project started in 2010. By 2012 the first greenhouses were heated. In 2015 two more gardeners were linked to the heating infrastructure. A second project is underway in the vicinity.

ADDED VALUE FOR COMMUNITY
- Influence in way of development
- Cheaper energy (after new network was built)
- Possibility to be a biological green gardener

TYPE OF ENERGY: Geothermal

GOAL OF PROJECT: Heating of greenhouses for professional gardeners

PROJECT FASE COMMUNITY FINANCE WAS USED: Exploration phase

FORM OF FINANCE: Equity

FINANCED BY COMMUNITY: Not known

TOTAL FINANCE NEEDED FOR THIS PHASE: around 10 million euros

EXPLORATION AND PERMIT FASE FINANCED BY: Gardeners and local government (province, and Kampen

THE NETHERLANDS
KOEKOEKSPOLDER (ZWOLLE)
PHASE TWO

PROJECT
After the success of the first geothermal project in Koekoekspolder a second project was launched close to the site of the first one. The goal was to provide more professional gardeners with geothermal heating. Extra challenges were: would there be enough energy to be generated close to the site of the first project? and could local community and government be involved again? Advantages were that the exploration phase is not necessary and permits can be realised quicker.

TYPE OF ENERGY: Geothermal

GOAL OF PROJECT: Expansion of heating of greenhouses for professional gardeners

PROJECT PHASE: Expansion of existing geothermal project

FORM OF FINANCE: Equity and loans

PERMIT FASE: Project will move straight to permit phase

TOTAL AMOUNT FUNDED: Still open

AMOUNT FUNDED BY COMMUNITY: Still open

BEST PRACTICES
- Potential users
- Talking to government funds to participate (several local government parties), but these need a guarantee that the new permit will be approved before being able to finance.

ADDED VALUE FOR COMMUNITY
- Cheaper energy

FINANCED BY
1. Expansion possibilities; expansion was possible in same area using experience and stories from first users
2. Combination with other renewable energy sources; sun and wind possible.

BOTTLENECK
Government funds need guarantee that permits will be approved but this takes time and drilling equipment has to be booked sooner to realise time frame.

SUGGESTIONS
National government could fund first two phases through subordinated loans to absorb risk, community and/or local government could take over loan from drilling phase onward.

SPAIN
SOMENERGIA-3
SOLAR ENERGY INSTALLATIONS

ADDED VALUE FOR COMMUNITY

- Clean renewable energy
- Risk-sharing by no direct investment in individual project, but in equity of SomEnergia Cooperative
- Fixed financial return of 1,75% on investment

TIME NEEDED TO FUND

2 weeks (1.500 people). Two hours after the opening, the total investment already exceeded one million euro. During the first week (in which the maximum amount that each person could invest was €5,000 euro 3.5 million was raised. Once this limit was removed, the last 1,5 million was raised within 24 hours.

PROJECT

Som Energia literally means “We are energy” in Catalan language and is the first renewable energy cooperative in Spain. The cooperative is selling energy contracts with only renewable energy (>110.000 customers) and produces their own renewable energy through biogas, wind and solar installations.

The cooperative was founded by 150 citizens in 2010. In 10 years this number has grown to over 64.000 people (60% in Catalunya). Most private citizens cannot afford to realize wind, hydro or solar projects. Som Energia offers the possibility to act together in supporting the concept of renewable energy supply drawn from regional sources and also building them themselves (most of the projects are not in Catalunya, but in the South of Spain).

Som Energia has built its own solar power installations and pursues new renewable production projects, including the first citizen-owned 500 kW biogas plant in Spain. The goal is to produce enough electricity to meet 100% of the members’ demand. Consumers of power supplied by Som Energia are not only customers but also co-owners of the cooperative and can vote on decisions how to take it forward. In addition, they can invest directly in the development of renewable energy.

Som Energia combines in an exemplary way the cooperative idea, citizens’ commitment and local energy generation from renewable sources. It offers every citizen the chance to participate in the move to renewable energy supply in Spain, expressing a growing grassroots demand.

Som Energia members can participate and have access to renewable energy. They can invest directly in renewable projects to develop a sustainable economy. Up to date, the amount of €11 million has been invested, producing 17 GWh every year (energy for 6.800 houses).

SPAIN
SOMENERGIA-3
SOLAR ENERGY INSTALLATIONS

TYPE OF ENERGY:
Solar

GOAL OF PROJECT:
Setup 3 solar energy installations (7,2GwH)

PROJECT FASE:
Implementation phase

FORM OF FINANCE:
Equity

EXPLORATION AND PERMIT FASE FINANCED BY: Members of SomEnergia

FINANCED BY COMMUNITY:
€5 million

BEST PRACTICE

- Building community first. From 2010 they grew their community from 150 people to over 64,000 people. This community is now very interested in investing.
- Use investment in equity in cooperative to spread risk for members/investors. Because the members in SomEnergia invest
- Funds are not raised until they are needed. Although the investment is done in SomEnergia, and SomEnergia then invests into individual projects, investment is raised more easily if a very specific project is shown as investment opportunity.
- The cooperative model was already very popular in Spain (Catalonia)
- Strong growth of investors through word of mouth and because Somenergia is very transparent.
- Low threshold to join cooperative (€100 membership).When leaving the cooperative this money is returned.
- the investment is spread amongst members by limiting the maximum amount of investment per member to €5.000 for the first week (legally the amount invested into a cooperative is maximized at €100.000 per person in the cooperative in Spanish law)

BOTTLENECKS ENCOUNTERED

- Users are currently also interested in direct participation in specific projects. Some of them because of local commitment (or as a way to reduce NIMBY problems), others for higher financial returns. With current regulation that is not allowed (current investors can only invest in the equity of the SomEnergie cooperation). They are researching the potential of specific crowdfunding for these projects.
- By raising direct funding for specific projects they expect a higher risk-appetite from investors. This way higher risk projects (geothermal?) can also be funded through a (small)part of the community, without exposing the large group of investors to the risk (current investors receive a fixed return on their investment in very conservative, low-risk projects).
- Because of the large group of members, direct communication and commitment is difficult to maintain. There is only a small group of active members. For the investment side this is not a problem (projects are funded quickly), but for additional commitment or education Somenergia would like to have a stronger commitment with their member base.

SPAIN
GENERATION KWH

ADDED VALUE FOR COMMUNITY

- Cheaper energy. Possible to buy energy against cost price (€0,01 lower then market price).
- Clean renewable energy
- Repayment in 25 installments (4% of loan amount every year) with 0% return on investment
- Money is used to speed up the energy transition

BEST PRACTICE

- Easy contracts (€100 for every "energy-share")
- Focus on impact (energy transition), not financial return (0% interest)
- Loan will be guaranteed to be paid back in 25 years.
- Simple way to attract

BOTTLENECKS ENCOUNTERED

- Small loans on average (€1.000 per person), so a lot of lenders needed.
- Without specific projects, difficult to attract funding

TYPE OF ENERGY:
Mix of renewable energy

GOAL OF PROJECT:
Support new renewable energy projects with 0% loan

PROJECT FASE:
Implementation phase

FORM OF FINANCE:
Loan 0% (+reduction on energy bill)

EXPLORATION AND PERMIT FASE FINANCED BY:
Other shareholders

FINANCED BY COMMUNITY:
€4,2 million

Currently 4.280 people lend a total of €4,2 million to the initiative, that is used to finance 3 projects.

GERMANY
ELEKTRIZITÄTSWERKE SCHÖNAU EG (EWS)

BEST PRACTICES

- Involving soft marketing to reach prospective investors
- Extensive knowledge of legal framework. This is essential to realise successful funding (for example financial risk sharing should be done via a "qualified subordinated shareholder loan" "qualifiziertes partiarisches Nachrangdarlehen").
- High degree of trust/ confidence in board members who run the collective
- Including well known testimonials of the renewable energy community

PROJECT

Initiators of EWS applied in 1990 to buy the local electricity grid from the regional utility KWR (after two positive local referendums) because KWR refused to exclude nuclear power from the energy mix in Schönau (KWR is the "Kraftübertragungswerke Rheinfelden AG", which has been taken over by EnBW ("Energie Baden-Württemberg AG"). Schönau is a municipality with about 2500 inhabitants. EnBW is a big German publicly traded electric utility company. Since the price for the local grid originally was 8.7 million German Marks, they asked for donations in the whole Germany. After having collected several million German Marks they took over the local electricity supply in July 1997 as EWS. Nowadays, the registered cooperative is selling excess electricity from renewable energy sources (hydropower and wind energy) in the whole of Germany. This is possible since 1998 due to the liberalization of the electricity market in Germany.

With the "sun cent" (Sonnenpfennig/Sonnencent which is a grant/ subsidy for EWS customers) they fostered new RE installations (especially solar PV).

TYPE OF ENERGY:
Regular energy company

GOAL OF PROJECT:
Takeover of local energy supplier

PROJECT PHASE:
Operational phase and exploration phase

FORM OF FINANCE:
Donations

FINANCED BY COMMUNITY:
Originally estimated worth at 8,7 million German Marks. The final paid amount was lower after financial evaluation. Exact amount is not known.

OVERALL FINANCING FOR THIS PHASE:
Exact amount not known but fully funded by community funding

TIME NEEDED TO FUND: Not known

TIME AVAILABLE FOR FUNDING:
Open

BOTTLENECKS

Changing regulation. For example: In 2012 the capital investment act ("Kapitalanlagegesetz" = KAG) came into force. Since then registered energy cooperatives (eGs) are not finance companies, eGs are not allowed to collect money anymore and are not allowed to hold majority shares in (energy) companies. They have to be the operators of the RE power plants by themselves

GERMANY
THÚGA AND BADENOVA

(With special thanks to mr Burghard Flieger and Michael Kraml)

BEST PRACTICES

- Tthe participation of the famous eco-energy pioneer Michael Sladek (nickname: “The Electricity-Rebel”), the founder of EWS.
- Actively Involving the press after the first € 500.000,- was raised.

PROJECT

In 2009 the newly founded energy cooperative “Energie in Bürgerhand eG” wanted to buy a share in the local energy supply company in and around Freiburg city called “Badenova AG & Co”. KG the share was held by “Thüga”, a gas distribution company (at that time a 100% daughter of E.ON SE, a big German publicly traded electric utility company). However, the original idea of buying the shares held by Thüga in badenova was legally not possible. Therefore, the plan was to buy a share in Thüga to realise the community participation that way. Within a few weeks 500.000 Euro had been realised and the press was attracted. After 6 months the Energie in Bürgerhand eG had received 30 million Euro without a project. Unfortunately the eG was not accepted as shareholder. Instead profit-sharing rights (“Genussrechte”) were offered which implies no equal say. Therefore, the eG refused to accept that offer and the plan to buy Thüga failed. This meant the money on the fiduciary account had to be paid back. The compensation of the cooperative’s ca. 10% financial loss was achieved via a special merger with EWS.

TYPE OF ENERGY:
Regular energy company

GOAL OF PROJECT:
To realise community participation in energy supply.

PROJECT PHASE:
Operational phase

FORM OF FINANCE:
1. Donations (small part)
2. A Fiduciary account was established (major part of the funding). The interested investors could transfer money to this account. It would only be used if the buying of the share was successful. If not the money would be returned unless an alternative project was agreed on.
3. Equity in a registered cooperative (ca. 10%; for economic activities e.g. to ascertain the value of the share via independent expert report).

FINANCED BY COMMUNITY:
€ 30 million (without the project being guaranteed

TIME NEEDED TO FUND:
€ 500.000,- in a few weeks.
30 million euros in 6 months

TIME AVAILABLE FOR FUNDING: Open

LESSONS LEARNED

- Possible legal models are crucial to sort out before funding is gathered.
- Have a fall back alternative. As the eG was not accepted as shareholder they refused to accept that offer and the plan to buy Thüga failed. This meant, the money on the fiduciary account had to be paid back. The compensation of the cooperative's ca. 10% financial loss was achieved via a special merger ("aufnehmende Fusion") including all members of the cooperative) with EWS according to EWS' conditions of membership. The merged new members had no voting rights and no right to a profit share of EWS in the first year to compensate the former financial loss of the cooperative.

THE NETHERLANDS
COÖPERATIE WPN
WINDPOWER NIJMEGEN

ADDED VALUE FOR COMMUNITY

- Yield (10% over total project, so not per year). Yield over 7% divided: ½ paid out as windbonus the other half invested into sustainable energy fund to kickstart new projects
- Also Per MW of generated energy one euro is added to a local fund. Once every two years proposals for local projects can be submitted.

Construction started in April 2016. The wind farm was operating before the end of 2016.

PROJECT

An elderman of the city of Nijmegen wanted to realise a windfarm to add to the energy supply of the city. The first attempt to attain a permit however stranded at the council of state. As a pilot the municipality gave WiekII (a sustainable energy consultancy) the opportunity to try and realise a feasible project with the necessary permits. The municipality supplied in the land (at zero costs for the project until operational fase) and funded the cost of the spatial planning. WiekII managed to realise the project and 4 windturbines are operational. The Project started in december 2012 as citizen-led bottom-up initiative. The organisation received a development grant from the municipality to prepare the project.

TYPE OF ENERGY:
Windenergy

GOAL OF PROJECT:
Generating electricity for inhabitants of the city of Nijmegen

PROJECT PHASE:
Completing of permit phase. Exploration and permit phase were pre-financed by WiekII (the developing firm) together with local government. the investment of local government was repaid after the financial close of the project (at the end of the permit phase). The local government also gave a subsidy for development costs (€60k), and developing firm Wiek2 .

FORM OF FINANCE:
Equity (certificate in energy collective a cooperative started by 1013 local citizens). WiekII is a foundation that has managed the project and financed it until the financial close phase (in which all the financial consequences are clear. In this phase the collective could buy the shares. The collective owns 95% of the shares. the other 5% are owned by the regional development company “Oost NL”. In the meantime WiekII is realizing a sunpark at the same location

TOTAL FINANCING:
€14,7 million for 4 wind turbines (7.000 households)

- 11,7 million bank loan
- 2 million crowdfunding (equity)
- 1 million Oost NL regional energy development agency (Innovatie- en Energiefonds Gelderland) (equity)

BEST PRACTICES

- Local municipality involvement. The municipality of Nijmegen pre-funded a lot of costs in the exploration and permit fase. Once financial closure was reached government sold their involvement to the community and received all their investment back.
- Involving the community from the start
- Starting with a small, dedicated community who was strongly involved and interested in sustainable energy. Not waiting for broader community to join. They joined later.
- Split between cooperative (to attract investment) and commercial entity to run the wind farm. Community invested in cooperative (equity) and received an additional bank loan. This money was invested in the Wind farm commercial entity in exchange for 95% of the shares. The other 5% was invested by a regional energy development agency. They will sell their shares back to the community after 5 years.

BOTTLENECKS

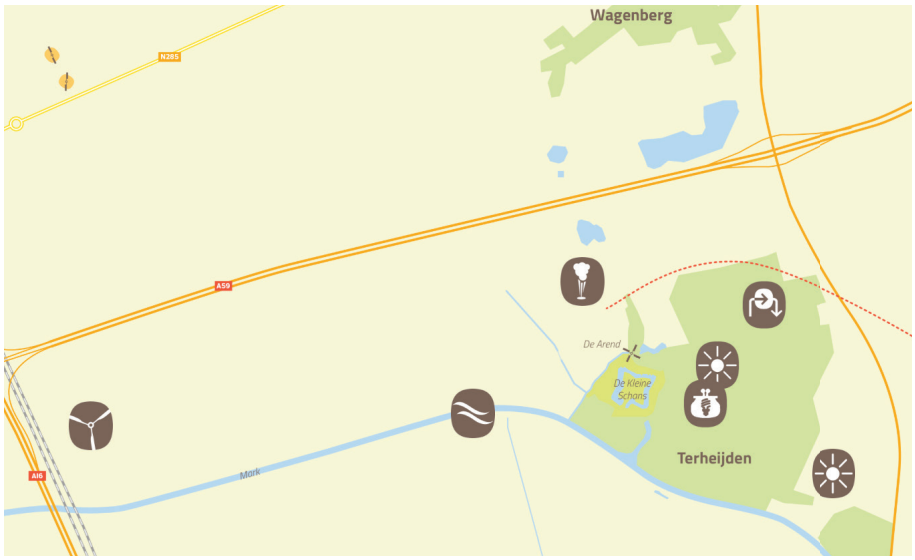
- Difficult to involve broad community. Approached all local energy users. Investors who joined community all had background knowledge of energy, sustainability etc.
- Difficult to keep the community involved after realization phase as committed community (not just as investors).

THE NETHERLANDS
TERHEIJDEN

ADDED VALUE FOR COMMUNITY

- Yield (10% over total project, so not per year). Yield over 7% divided: ½ paid out as windbonus the other half invested into sustainable energy fund to kickstart new projects
- Also Per MW of generated energy one euro is added to a local fund. Once every two years proposals for local projects can be submitted.

Construction started in April 2016. The wind farm was operating before the end of 2016.



PROJECT

In the village of Terheijden a new energy source was needed to generate heating for 2500 households. After the experience gained in the project at Nijmegen, several parties wanted to combine different forms of sustainable energy to make the generating of heat and electricity for these households completely sustainable. Wind, sun en preferably Geothermal energy.

The national government provided a subsidy for the start-up fase (4 million euros). The subsidy originates from a 'testing ground' subsidy given by the national government. It will be used to construct the heating distribution system. Upon completion ownership of the heating distribution system will be transferred to the regional distribution system operator (DSO) "Enexis'. The exploitation of the system, the actual supplying of the energy, will be done by an energy company called "Traais Bv" whose shares will be owned by an energy collective also called Traais. Local citizens will be the members and thus owners of the energy collective. Izzy projects is managing the project and will supply the financing until a stage were the financial consequences are clear (financial close). When this phase is reached the energy collective will acquire the shares of "Traais BV". The project has started with the building of the heating network. In later phases 1 wind turbine, a sunpark and a heat/cold storage system (collecting from the river) will be added.

TYPE OF ENERGY:
Combination of different forms of sustainable energy. If possible including Geothermal energy.

GOAL OF PROJECT:
Generating heating for 2500 households in the village of Terheijden

PROJECT PHASE:
Community funding is needed after the permit phase is completed, for the development and building of the network and plant.

FORM OF FINANCE:
Equity in the form of a certificate in the Energy collective which will be in charge of the exploitation of the system

TOTAL FINANCING:
Around 50 million euro for total project

FINANCED BY COMMUNITY:
Still being designed

BEST PRACTICES

- Involve a group of "ambassadors" (people who are well known and respected in the local community) from the start, as kickstart group to create commitment
- Making the offer of member-ship exclusive, inviting specific groups based on social profile.
- Using a locally supported goal as a goal which can be realised with sustainable energy. In Terheijden the local swimming pool, which the community had realised through reward based community funding could be opened longer by using sustainable energy
- Extensive use of visual tools to show the effect of different kinds of sustainable energy in the local environment.
  For example:
  - one man Cinema 3d experience,
  - tools which show the effect on the level of an individual house like energy generated, sustainability realised etc.
  - A scaled model of the area on which the visual effect of different with sustainable energy equipment can be shown and moved around (VR, or projection)

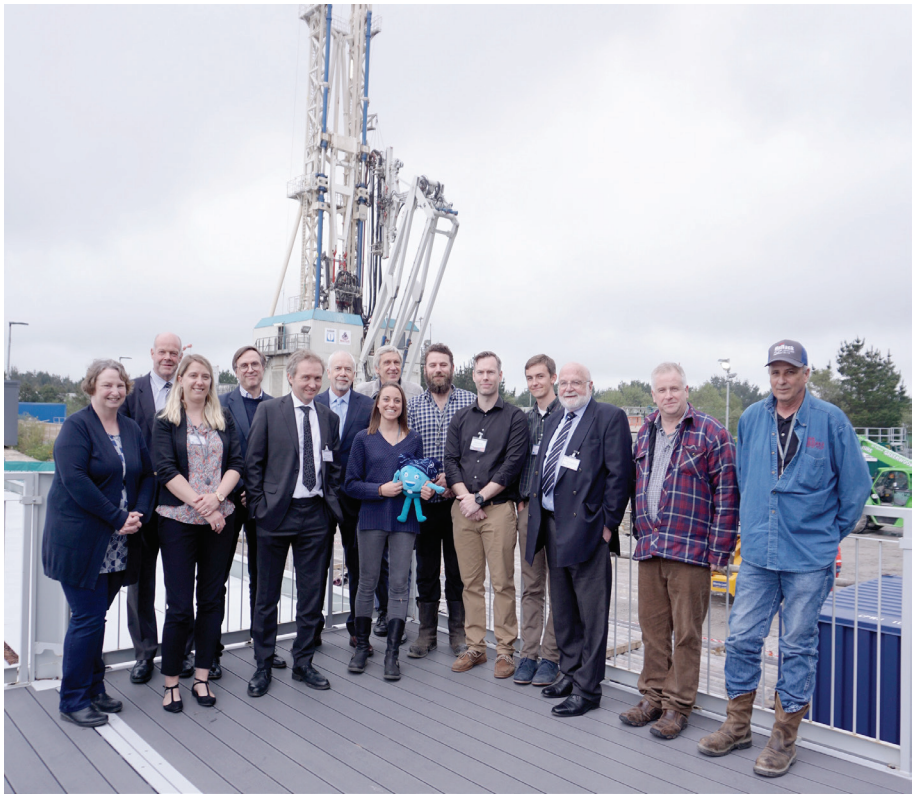
BOTTLENECKS

- Keeping participants involved beyond investors role
- Realising the ambassadors group locally

UNITED KINGDOM
UNITED DOWNS

BEST PRACTICES

- Very active social outreach programme which was the most important factor in increasing the commitment to and acceptance of the project by the community. 1,5 full time employee who attend all local meetings (church,societies, clubs etc.) to inform locals about the project, drop in days at the drilling site with viewing platform, lecture room with especially designed information boards at the site, and presentations at schools (all levels) and universities .
- Starting investor opportunity locally and then broadening the circle gradually until the whole UK could invest. Only the last couple of 1000 were generated outside of the direct region
- Using a professional platform specialised in funding for sustainable energy projects which increases the outreach.



PROJECT

Geothermal Engineering Limited. (GEL) wanted to realise a number of objectives with the United downs project. Among others they wanted to: promote the production and distribution of renewable energy sources, transfer knowledge to stakeholders, and explore the deep geothermal resources in Cornwall. The granite rock in Cornwall provides a good opportunity to raise Geothermal energy for heating and electricity. That is why they started the United downs deep geothermal power project. The funding by the European regional fund, Cornwall council and the public has allowed GEL to drill two deep geothermal wells from its site at United Downs, near Redruth. After circulation testing a 1-3MW power plant will be built at the site to demonstrate the technical and commercial viability of supplying both electricity and heat.

TYPE OF ENERGY:
Geothermal energy

GOAL OF PROJECT:
Local supply of electricity and heat

PROJECT PHASE:
Drilling Phase

FORM OF FINANCE:
18 month bond, with extension possibility for 6 months, yield 12%.

FINANCED BY COMMUNITY:
€ 5,2 million pounds

OVERALL FINANCING FOR THIS PHASE:
€ 17 million pounds (10,6 million ERDF, 2,4 million pounds Cornwall council)

TIME NEEDED TO FUND: 10 days (600.000,- per day

TIME AVAILABLE FOR FUNDING:
3 months

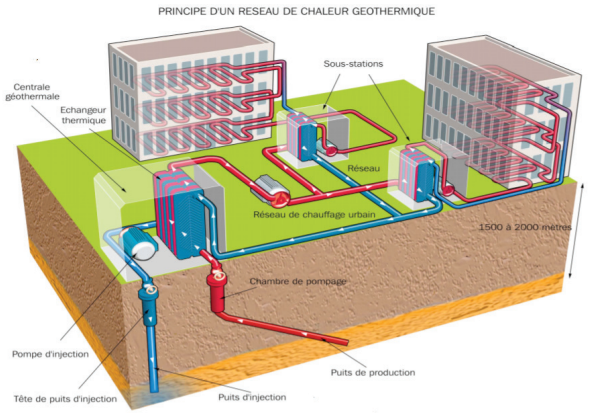
BOTTLENECKS

- Could not raise more funding because of European limits for crowdfunding
- Participation in the community funding was mainly from the 30-45 age group capable of using the crowdfunding technology of the platform.
- Hard to reach the local community as investors as education and wage level are very low. In the community funding was mainly from the 30-45 age group capable of using the crowdfunding technology of the platform. Considering giving out shares in next round.
- Difficult to increase local acceptance and commitment through the investing. Social outreach and local spending of the workforce were more effective.
- Time lost because a grant fell through. Raising of capital difficult because of high risk in drilling phase.

FRANCE
CHAMPS-SUR-MARNE
GEOTHERMAL HEAT NETWORK PROJECT

BEST PRACTICES

- Use community funding after permits are realised.
- Start with small group of investors and broaden investor group gradually
- Smart solutions which make it possible to supply a larger community.
- System will be able to supply heat and cold so is future proof



PROJECT

In this project the aim is to create a geothermal plant that will supply 10,000 housing equivalents with heating and supply of clean, local, renewable sanitary hot water. It will be fueled for 82% by geothermal energy. The equipment that makes up the plant and its heat network is increasingly "smart", It will optimize the adjustment of production to demand, anticipate peak heating periods and reduce energy losses as much as possible. Two wells will be drilled to 1900 meters deep.

TYPE OF ENERGY: Geothermal energy

GOAL OF PROJECT: Heating and hot water supply to 10.000 households

PROJECT PHASE: Drilling Phase

FORM OF FINANCE: Loan

FINANCED BY COMMUNITY: € 1 million

OVERALL FINANCING FOR THIS PHASE: € 40 million

TIME NEEDED TO FUND: 2 days

TIME AVAILABLE FOR FUNDING: Open

CONCLUSIONS

Looking at the best practices described in this report it can be seen that community funding can be effective in raising (limited) funding for sustainable energy projects and also in increasing the commitment of the community. However, the best practices also show that it is essential to look at the conditions surrounding a specific project to decide which form of community funding fits best. And how to approach a community funding initiative.
For example, regulation, the kind of community that is involved, the government support that is available, the amount and duration of funding needed, and the risks involved are important factors influencing that decision. It is best to evaluate these conditions on a project to project basis and choose the best form of community funding based on this analysis. The lessons learned and bottlenecks can be used during the analysis to make sure a successful community funding project is the result.

HYPERLINKS

KOEKOEKSPOLDER
https://www.greenhousegeopower.nl/
https://www.facebook.com/Koekoekspolder
https://twitter.com/koekoekspolder

KOEKOEKSPOLDER PHASE 2
http://koekoekspolder.nl/duurzame-energie/
https://www.facebook.com/Koekoekspolder
https://twitter.com/koekoekspolder

SOMENERGIA
https://www.somenergia.coop/
https://www.youtube.com/user/SomEnergia
https://twitter.com/somenergia
https://www.facebook.com/somenergia

GENERATION KWH
https://www.generationkwh.org/
https://twitter.com/generationkwh

COOPERATIE WPN
https://www.windparknijmegenbetuwe.nl/
https://twitter.com/WindpowerNijmeg
https://www.facebook.com/WindparkNijmegen/

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THÚGA AND BADENOVA
N.A.

CHAMPS-SUR-MARNE GEOTHERMAL HEAT NETWORK PROJECT
http://geomarne.reseau-chaleur.com/

CROWDTHERMAL

WEB: HTTP://CROWDTHERMALPROJECT.EU
SOCIAL MEDIA: @CrowdthermalEU