



From information sessions to community led initiatives: an overview of public involvement in renewable energy projects

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Keywords: renewable energy; participation; energy transition; community led initiatives

To be considered for Best Paper Prize

Abstract

The energy transition and how to achieve this transition is receiving more and more attention in both scientific literature and popular press. In order for the energy transition to be successful, both top down and bottom up actions are needed to tackle the challenges of providing enough renewable energy to reach the climate goals in Europe.

Due to the inherently distributed nature of renewable energy production, as opposed to fossil energy production, the general public is more and more faced with the spatial consequences of renewable energy. Large scale renewable energy projects, like wind farms or biomass installations, are partly dependent on local support to be successful. The success of local initiatives, on the other hand, is largely reliant on the strength of community frameworks and local demand.

This paper will first of all explore the many ways of public involvement in renewable energy projects by comparing different projects with a diverse range of participation. Through examples ranging from information sessions to community led initiatives the notion of public participation is addressed. A comparison between international cases and Flemish cases is made in order to analyze the participation level in Flemish renewable energy projects. Secondly the different types of initiators of renewable energy projects are compared: the drivers of private developers, national or local governments and local citizens differ and they all have a different way of involving the public. The preliminary overview of these two dimensions will give a more in-depth insight in the way renewable energy projects are dealing with public involvement. It will facilitate detecting missing participative approaches and absent actors.

The lessons learned will be critically assessed to explore the possibilities to adapt certain participation approaches in the Flemish context.

Introduction

Until recently, energy production could be concentrated in small, specifically dedicated pieces of territory powering the whole country. Fossil fuel or nuclear power plants can produce a large amount of energy while being virtually invisible. Gas pipes and electricity cables are invisible underneath the surface and the raw materials extracted to feed the power plants are imported from somewhere else. Most people are never confronted with the spatial consequences of power production, besides the small clouds of smoke produced by a power plant. The needed energy transition towards renewable energy sources will however change this invisibility (Sijmons, 2014). Although the impact of one fossil fuel power plant is locally greater than for instance one wind turbine or one solar panel, due to the inherently distributed nature of renewable energy production, the local consequences of renewable energy production will be noticeable on a much larger scale. Because of this large scale local impact renewable energy has, local support for projects is crucial. Local support can be defined in many different ways: inhabitants can be persuaded to support larger energy projects by organizing information sessions. But a local community can also start its own energy initiative. This paper wants to explore the many ways local public involvement in renewable energy projects can occur by a brief literature study. Getting insight in the various approaches how local citizens can get involved in renewable energy projects will help policy makers on all levels decide which method to implement for each specific project and how local initiatives can be supported.

Local level within policy documents on renewable energy

The importance of the local level in the transition to renewable energy has also been underlined in different policy documents. In 2009, under the Renewable Energy Directive, the European renewable energy goals have been set on a share of 20% of renewable energy in the overall energy supply. Each EU member country has received binding national targets for raising the share of renewables in their energy consumptions by 2020. These national targets vary for each member state, reflecting the different starting points and the ability to further increase it. For Belgium the national target has been set on 13% (EC, 2009). These national targets not only impact national governments, but also impose tasks on regional and local governments and other organizations. The directive therefor clearly states that cooperation between the different levels is needed. In addition to this, an appeal is also made on market actors together with households and individual consumers, to get involved in contributing to the implementation of the EU reduction commitment. This direct appeal to local actors clearly demonstrates that besides the big renewable energy projects initiated by national or regional governments, smaller projects, in spite having less of an impact on the level of greenhouse gas emissions, should also be stimulated. The directive furthermore mentions the need to develop suitable information, awareness-raising, guidance or training programs in order to inform citizens of the benefits and practicalities of developing and using energy from renewable sources. The exchange of best practices in production of energy from renewable sources between local and regional development initiatives should be supported. Finally a clear statement is made on the benefits of decentralized energy production: local energy sources can be used, local security of energy supply can be increased, transport distances for energy can be shortened and energy transmission losses can be reduced. Furthermore decentralized energy production fosters community development and cohesion by providing income sources and creating jobs locally (EC, 2009).

The Flemish policy on Energy 2014-2019 (Turtelboom, 2014) also reflects on the decentralized nature of the future energy production. The local level is seen as very important for the energy transition because of sustainability and proximity. In that perspective more and more local governments have signed the Covenant of Mayors. The policy document also mentions the importance of awareness raising and information actions.

Social aspects of the energy transition

The climate and energy goals in Europe and corresponding national and regional goals are in general mainly analyzed from a technical and economic point of view. The social aspects that influence the acceptance and support of these measures are however essential in order to reach the set goals. Several international studies have showed that in general the public support for renewable energy projects is very high. This attitude, however, shifts when a local project is being implemented in the vicinity of the respondents. Especially wind turbine projects can generate substantial local resistance (Van Rompaey, 2009). The research of Van Rompaey (2009) showed that there is a great need for more participation and collaboration in the planning process of (in this case) wind energy projects.

Residents need to be involved in order to avoid negative attitudes towards the project. A research executed for the Flemish Energy Agency (VEA, 2014) on the support of renewable energy in Flanders clearly showed that 45% would like to be informed if a wind turbine project would be realized in the vicinity, while a further 49% would like to be both informed and consulted.

The mode in which a renewable energy project is executed plays an important role in shaping attitudes towards it (Musall & Kuik, 2011) and the local acceptance of energy projects. Projects owned or partly owned by the community are more locally acceptable and have fewer problems obtaining planning permissions than others (Walker, 2008). Further research into public attitudes towards renewables indicates that people would welcome opportunities for greater involvement in renewable energy development (Devine-Wright, 2005; Upham & Shackley, 2006; Upreti & van der Horst, 2004). In Flanders, 59% of the people would like to contribute financially to a wind turbine project and enjoy the revenues (VEA, 2014).

Various ways of public involvement

First of all a brief overview of the various ways citizens can get involved into projects will be given. The concept of public participation is not new and can be defined in many different ways. Getting a greater insight into participation levels in general will facilitate the analysis of public involvement within renewable energy projects.

The participation ladder and third generation participation

In 1969 Arnstein identified several degrees of citizen participation. She introduced a ladder of citizen participation that showed there can be more or less participation (Arnstein, 1969; Lancksweert, 2009; Taylor, 1998). She identified the following steps:

1. Information: Stakeholders are informed, but have no input. This is actually not a true form of participation.
2. Consultation: Opinions and experiences of stakeholders are gathered. The result of this consultation is however not binding.
3. Advise: Stakeholders can give their opinion, this opinion is taken into account by the government. They can however also motivate why they do not follow the objections raised.
4. Co-production: The agenda is jointly determined by both government and stakeholders and solutions are found together. The final decision, however, will still be taken by the government.
5. Co-decision: co-production between government and stakeholders and the final decision is also taken together
6. Self-management: The involved stakeholders can decide independently.

Nowadays participation is often seen as a broad term with different interpretations, these interpretations are moreover rapidly evolving. In his dissertation Lancksweert (2009) gives a comprehensive overview on public participation in Flanders. He states that in the past participation processes in general, but also participation processes within spatial planning, mainly concerned giving people the possibility to voice their opinion in a consultation process. Such participation was mainly achieved through the organization of a public inquiry or by the organization of advisory boards. Consultation is basically one-sided and does not offer the opportunity for a real dialogue. In the last fifteen years, however, we have seen a change in the way the public can get involved. The step of consultation to real interaction between the government and civil society actors is made more often. Within interactive policy the government and participants are cooperating from a very early stage. Today, participation can go even further: citizens are not only involved in what the government does, but also the other way around: the government must respond to the citizens' initiative and support it.

The different forms of participation mentioned above can be classified into three generations of participation (Lancksweert, 2009). The first generation is based on consultation. Mainly empowered citizens react to the opportunity given to respond on policy documents. This corresponds to the first two steps of the participation ladder. The second generation of participation deals with interactive policy making and co-production and corresponds to the fourth step on the ladder of Arnstein. Finally, the third generation, that only emerged recently, starts with a public initiative. The government should support and facilitate these types of initiatives. While the second generation of participation is still a top-down approach in which the initiatives still originates from the government, the third generation of participation starts bottom-up. Lancksweert also differentiates between vertical and horizontal participation. Vertical participation focusses on the relation between government and citizens.

Horizontal participation on the other hand focusses on all the activities by and for citizens. These activities have been organized by the citizens themselves to improve the living conditions in their communities. This type of participation centers more on involvement in the society than on influencing policy.

The third generation of participation is linked to a government that is withdrawing more and more as a result of the critical evaluation of the welfare state. The increasing critical assessment on which tasks should still be done by the government and which tasks should be left to the society has its impact. Together with the increasing assertiveness of citizens, self-organization and initiatives are becoming more frequent. This implies that the government should support and stimulate spontaneous citizen initiatives.

Participation within renewable energy projects

Renewable energy projects can be measured on the participation ladder of Arnstein. Starting at the lowest step of the ladder conventional renewable energy projects can be placed. Such projects have little to no direct involvement of local people and are developed by a distant and closed institution that generates energy for the grid. In order to avoid negative attitudes towards renewable energy projects, especially wind turbine projects, most energy institutions now organize information sessions to inform the residents about the upcoming project. These information sessions can take on different forms ranging from a central presentation with possibility of asking questions in public, to an 'information market', where information is given individually and there is space to discuss personal questions. The advantage of the latter form is that opponents of the renewable energy project do not get a general platform to advocate their point of view and in doing so creating a negative atmosphere around the project. Within these two examples, there is no true form of participation.

All over the world, different forms of financial incentives are used to promote participation in renewable energy projects. Renewable Energy Credits are tax credits offered by the government of the United States of America as an incentive for the installation and operation of renewable energy systems such as solar or wind power (Mendonça, 2009). With the tax credits citizens and companies are stimulated to participate in the generation of renewable energy. Feed in tariffs on the other hand are designed to oblige utilities to purchase renewable energy from generators in their area, at a price set by the government.

Higher on the ladder a diverse range of the community renewable energy projects can be found. Within these projects there is a high degree of involvement of local people in the planning, setting up and, potentially the running of the project (Walker & Devine-Wright, 2008). But although the name 'community project' suggests a very high rate of participation; several different forms can be distinguished. Community ownership is not a clearly defined term and different forms of community ownership exist in practice. Projects can be completely owned by a municipality or can be implemented in cooperation with private actors. There are development trusts and cooperatives as well as cases in which shares are owned by a local community organization like a community charity (Walker, 2008).

The recent popularity of local renewable energy activities is reflected in the growing scale and diversity of local-level activity (Adams & Berry, 2008) Walker (2008) has made a comprehensive overview of the different forms of community renewable energy projects focusing on community ownership by either financial investment or managerial control. A sliding scale of community ownership can be seen, ranging from a 100% community owned to projects under co-ownership arrangements with the private sector.

First of all there are cooperatives in which people in the local community or further away can become members of the cooperative and buy shares to finance the project. Then there are community charities which take the form of an association with charitable status that provides or runs facilities for the local community. Thirdly Walker (2008) mentions development trusts in which the interests of the communities are represented in revenue-generating enterprises. These latter two can in varying degrees act in the collective interest of everyone in a defined area. Finally shares can also be owned by a local community organization or privately owned. This part-ownership by a community gives only limited rights to control or to give input into decision making. The benefit of the shares is closely linked to the performance of the production unit. Moreover, investments through shared ownership only bring benefits to those able and willing to invest.

The first key dimension for renewable energy projects in this paper is the participation rate. The above listed initiatives of participation in renewable energy projects are projected on the axis of participation rate to form figure 1.

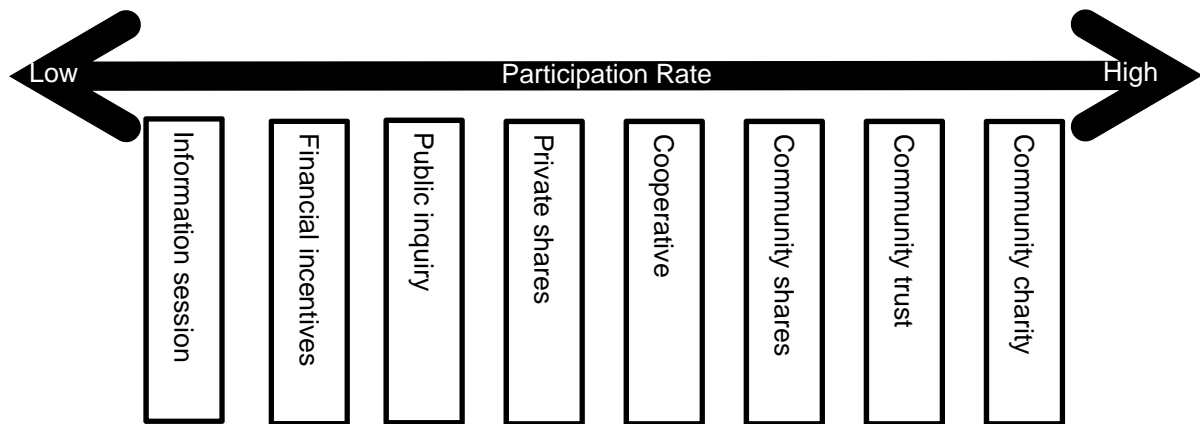


Figure 1: Participation rate in renewable energy projects

Overview of examples of participation within renewable energy projects

In this part examples of the above mentioned types of participation within renewable energy projects are investigated. If possible both international as Flemish cases are mentioned. We do not try to be exhaustive in giving examples, that would not be feasible as more and more renewable energy projects are started worldwide. The goal of this part is to clarify the different types of participation initiatives with a special focus on Flanders.

Information Session

In Flanders, of all the renewable energy projects, the siting of wind turbines is getting the most attention. This does not seem surprising due to their great impact on their environment. This impact combined with the densely built up area of Flanders results in the fact that a wind turbine is almost always in someone's view. According to legislation RO/2014/02 (2014) the applicant of a permit for a wind turbine project should describe in which way it has communicated with local involved parties and in which way further communication initiatives during and after the project will be accomplished. Applicants can mention which information sessions have been organized and in what way local governments and inhabitants have been involved in the realization of the project. Moreover, the applicant should describe in which way local support for the project is going to be stimulated.

The database of Ruimte Vlaanderen states that the three biggest applicants for wind turbines are Aspiravi nv, Electrabel nv and Electrawinds nv. On their website Aspiravi informs citizens on their projects in Belgium ranging from wind turbines on sea and land to biomass, biogas and waterpower. For each project more detailed information is available, moreover, they also announce information sessions, giving the opportunity to ask questions and to get a personal answer. These sessions are organized in the municipality the project is planned. Besides information sessions, Aspiravi also offers the possibility to join their cooperative, more information on this is found below. Like Aspiravi, Electrabel offers both general information on their website and information on specific projects. Information sessions for residents are organized for each project. Electrabel also offers the possibility to join a cooperative. Electrawinds finally, is a company which does not exist in Belgium anymore.

Financial Incentives

There is a very diverse range of different types of financial incentives to stimulate the production of renewable energy and with that the participation into the energy transition. Several countries in the world offer different forms of feed-in tariffs for renewable energy. The goal of these feed-in tariffs is to offer cost based compensation to renewable energy producers, providing price certainty and long term contracts that help finance renewable energy investments. In Germany, in 1990, the German

Parliament approved the feed-in tariff. The law stipulated that green energy should be allowed on the net and a minimum compensation was paid. Following this law, in 2000, a more differentiated feed-in tariff was introduced, distinguishing between the different technologies. In Denmark, the feed-in tariffs have been stopped and replaced by renewable portfolio standards and top-ups when renewable electricity was sold on the market.

In the United States, tax credits are used as an economic stimulus package, both for the conventional energy sector as for the renewable energy sector. A tax credit allows certain taxpayers to subtract the amount of the credit from the total they owe the state. The tax credits for wind energy as they are currently designed do not offer the possibility to all citizens to participate (Mendonça, 2009). Although the capacity in the US is growing, few Americans are directly participating in the development and ownership of wind projects. Only a small number of investors, like large corporate entities, have enough income to invest and enjoy the tax credit. The tax credits for solar energy on the other hand are much more equitable in the sense that more private people can take advantage of it, although the only people who can do this are those who have a large enough income to have the required tax obligations (Mendonça, 2009). Mendonça (2009) argues for a complete revision of the existing tax policies, in order to make them more inclusive, or to have a new look at other policies that can induce the participation of as many citizens as possible.

In Flanders the financial incentives for the production of green energy started in 2000 with the electricity law stating that the production of green energy should be supported. A complicated system of quota for the producers and green certificates was introduced. This support for green energy was such a success that the system had to be adjusted several times to keep costs at a reasonable level. Until 2015 owners of solar panels received green certificates for the amount of green energy they produced. Other projects like wind, biomass or biogas are also supported by the system of green certificates.

Public inquiry

In Flanders a wind turbine needs to have two permits: a construction permit and an environmental permit. Both permits are subject to public inquiries. The company or person who wants to build a turbine should have both permits. During the public inquiry everybody gets the possibility to look at the plans after which there is a possibility to submit a motivated objection. The final decision for building permits for wind turbines is taken by the regional government. The public inquiry gives inhabitants the opportunity to get involved, although at a low level, with the project by giving the possibility to state an opinion. However, the regional government can motivate on the basis of an assessment framework not to take the specific objections into account. This motivation why the objections were disregarded is obligatory.

Shares

Like for any other commercial company, it is possible to buy shares of companies that execute renewable energy projects. With buying a share you become part owner of that company. As a shareholder you are entitled to participate into that company and you share the profits. Case studies from different European countries showed that financial involvement of local residents clearly enhances their acceptance towards renewable energy (Musall & Kuik, 2011). In Denmark in 2001, an estimated 150,000 households owned or held shares in wind turbines, while in Germany an estimated 350.000 individuals owned shares in wind cooperatives (Walker, 2008).

Cooperative

Joining a cooperative is in fact a special case of buying shares of renewable energy projects. Energy cooperatives are in general more locally based with attention for the community and the emphasis is more on providing a green future than on generating the most profit.

Denmark is the pioneering country in the world in wind energy, where the ownership of wind projects was mainly in the form of cooperatives and individual owners, starting in the 1970s. In 2004 23% of all wind turbines were owned by over 100.000 members (Mendonça, 2009). In Denmark, membership of a cooperative was limited to those people living within the same municipality and within 3 kilometers of the turbine (Cohen, 2001). This original limitation was however gradually extended to include those living within 10 km (1989), those living in neighboring boroughs (1992), those who work or own a property in a borough but do not live there (1996), all of Denmark (1999) and finally in 2000, the entire European Union (Bolinger, 2001).

To support renewable energy sources cooperatives the European network of REScoop has been established. REScoop is a group of citizens that work together in cooperatives in the field of renewable energy. They develop renewable energy projects, sell sustainable energy or supply supporting services to new initiatives. REScoop supports groups and cooperatives of citizens with environmental, economic, social and political objectives. The basic notion is that everyone should have the chance to play an active role in the energy transition. Costs and benefits must be shared (REScoop).

An UK example of an energy cooperative is the Baywind Energy Co-op that aims to promote the generation of renewable energy and wants to secure participation of local citizens in large wind projects in the United Kingdom. It was the first UK co-operative to own wind turbines. Within the co-operative the voting rights are distributed equally amongst the members, regardless of the numbers of shares held. Baywind has a minimum share holding of 300 and a maximum of 20.000. This makes sure that buying a share is in easy reach for almost everyone, but no single individual or organization can have a controlling interest. The shareholders originate from the UK and from abroad. All profits derived from the electricity generation are paid back to the shareholders (Baywind). Based on the Baywind initiative, six more co-operatives have been established in the UK: Boyndie Wind Farm, Westmill Wind Farm, Fenland Green Power, Isle of Skye Renewables, Great Glen Wind Energy and Kilbraur Wind Energy. These co-ops are joined together in Energy4all to share their knowledge.

In Spain, Som Energia is Spain's first renewable energy cooperative. Som Energia produces and sells their own renewable energy with relatively small scale projects, set up close to where their members live. The cooperative is investing in several projects: nine solar projects and one biogas project. There are two possibilities to participate in the Som Energia project: people can become a member and as a member you can buy green energy, but people can also invest in specific projects. All members are co-owners and have an equal vote. Members that additionally participate financially in the investment projects will be paid a return on investment (Som Energia).

Ecopower is a co-operative in Belgium. The aim of Ecopower is to give every citizen the chance to invest in the production of renewable energy and in rational energy use. Ecopower mainly works on projects it develops itself but also invests in projects developed by third parties like local groups of citizens, local co-ops, city councils or private companies. Stakeholders can buy shares for the cooperative and each stakeholder receives a vote. As a member you can also buy green electricity through the cooperative. A return on investment is not guaranteed. To date already 50.000 joined the cooperative. The projects of Ecopower include wind turbines, water power, CHP and solar projects. Due to the large amount of participants a direct say in the location of for instance a wind turbine is not possible within the Ecopower cooperative. Smaller cooperatives like Beauvent, Pajopower and Storm are smaller in size which results in a larger say for each participant. At the moment 13 cooperatives are active in Flanders: Aspiravi Samen, Beauvent, Bronsgroen, Campina Energie, Core, EnerGent, Ecopower, Energie voor meer Natuur, Limburg Wind, Pajopower, Storm, Volterra and Wase Wind.

Community shares, community trusts and community charities

As opposed to shares owned by individuals or individuals joining a cooperative, which only brings benefits to those individuals involved, community shares, trusts or charities can act in the collective interest of all those people living in a certain area. Studies on community trusts and charities for renewable energy showed that the acceptance for renewable energy projects increased (Musall & Kuik, 2011; Warren & McFadyen, 2010). The study of Warren and McFadyen (2010) showed that for the island of Gigha in Scotland an increased acceptance could be found because the three windmills were owned by the municipality. In this example the local residents were not directly financially involved, but the municipality was involved for them. The profit of the three windmills on Gigha led to job creation, in-migration and growing numbers in the local school, for a small municipality dealing with out-migration in the past, this is a major improvement. The financial model which enabled the community of Gigha to buy the turbines was a three-way mix of grant funding, commercial loan finance and equity finance (Warren & McFadyen, 2010).

Another example is the study of Musall and Kuik (2011) on the community of Zschadrass where the local wind farm is co-owned and the PV-installation is fully owned by the local community through a community club and a foundation. In this case the local residents themselves are not directly involved. The profits of the renewable energy projects are directly reinvested in community projects. The main conditions for the successful co-ownership model in Zschadrass are the establishment of local organizations, functioning as a project carrier with the active involvement of locally trusted actors (local

council members) and the reinvestment of the profits to the benefits of the local population (Musall & Kuik, 2011).

For the purpose of this paper no example of Flemish community ownership of renewable energy projects was found.

Initiators of renewable energy projects

Renewable energy projects can be initiated by a variety of different actors. For the purpose of this paper three main groups are distinguished. First of all there are private investors, seeing renewable energy projects as profitable ventures. Opposed to this first group we can find public authorities. And last but not least we can find a growing group of community initiators for renewable energy projects. This forms the second key dimension for renewable energy projects: initiators. As opposed to the first dimension which shows a sliding scale on one axis of low to high participation rate, this dimension is structured like a pyramid, each actor forming one corner of this pyramid. Figure 2 shows the three identified actors.

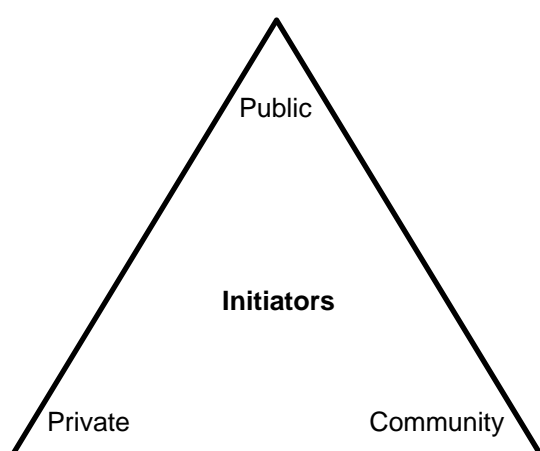


Figure 2: Initiators of renewable energy projects

Of course the boundaries between these three initiators are not clear. More and more public-private partnerships are started, governments are supporting community initiatives and communities are seeking cooperation with private investors to co-own energy projects.

Private initiator

Private initiators can be subdivided into two main groups. First of all there is the small scale production of private households, businesses and industry. These private initiators are mainly producing energy to consume themselves with solar panels, small wind turbines, geothermal energy and CHP. Only the surplus is injected into the main grid. On the other hand there are a few large private investors that are generating renewable energy for the grid and trying to produce economic returns for shareholders. They mainly invest in large scale wind turbines and biomass power plants. The period after 2000 was a very productive time for the renewable energy industry, fuelled by the targets set by many western governments for renewable energy production. Private investors profited from the feed-in tariffs. The main motive for private initiators is to make a profit for themselves or their shareholders.

Public initiator

Governments at different levels, from national to local can initiate renewable energy projects. In general local governments are more inclined to get involved in concrete projects. For local governments the Covenant of Mayors is an instrument to subscribe the European energy targets and to commit, amongst others, to the development of renewable energy sources. Key actions are outlined in a Sustainable Energy Action Plan. In Flanders, about half of the municipalities have signed the Covenant (VVSG). The five Flemish provinces support the municipalities and also set their own ambitious targets. The province of Limburg wants to become climate neutral by 2020, although it also states that this target is not possible, the province of Vlaams-Brabant wants to reach this goal by 2040

and the province of Oost-Vlaanderen by 2050. The province of West-Vlaanderen only supports its municipalities in joining the Covenant of Mayors, while the province of Antwerp wants to become climate neutral as an organization by 2020 and supports its municipalities to become climate neutral. At the regional level the Flemish government supports and facilitates renewable energy projects, but it does not, until now, initiate any projects themselves.

Community initiator

Although there is a large variety among community based renewable energy initiatives, what they all have in common is that they are typically locally based, non-commercial, small-sized and that they rely to a large extent on the engagement and actions of highly motivated people with limited power and limited resources (Oteman, Wiering, & Helderma, 2014). Projects are characterized as community initiatives when the local community participates actively in the planning, decision-making and/or exploitation of the project and the benefits from its revenues or other accomplishments. In Flanders the small cooperatives are the closest at the moment for community initiators.

Discussion and Conclusion

This paper has discussed the different forms of participation within renewable energy projects and the different types of initiators for those projects. This preliminary overview wanted to give greater insight in, and provide inspiration for, the way that the public can get involved in renewable energy projects.

The theory of Lancksweert on participation provided a way to structure the different methods of public involvement in energy projects. The fact, however, that different forms of participation already have a long history does not imply that everything goes smoothly. Research indicated a number of problems with the current forms of participation. It are usually the same, mostly empowered citizens who take part in participatory processes, the existing instruments for participation are little used, governments fail in many ways, there is a risk of abuse of participatory strategies and finally there is a gap between the formal decision structures and informal participation (Lancksweert, 2009). Studies further show that public involvement and participation are more likely to arise if the initiative has been taken by the citizens themselves and subsequently encouraged and appreciated by the government. People participate easier within community initiatives than in participation initiatives organized by the government. The ABCD-method (Asset-Based Community Development) even advocates a total change in policy approach. This method wants to support the change from participation of citizens in government initiatives to participation of government in citizens' initiatives. This method also corresponds to the third generation of participation.

This brings us to the fact that community ownership does not necessarily also mean inclusiveness. Investment in shared ownership is only possible for those being able to invest in a renewable energy project. The benefits of the revenues of the supplied energy will only fund those participating in the project, leaving the disadvantages as a burden for the whole community. If a project on the other hand is (partly) owned by a municipality or community trust, that institution can act in the collective interest of the community and use the benefits for collective purposes like local schools, public space, etc.

The search for striking examples of renewable energy projects in Flanders revealed that most projects are initiated by private initiators, both households and larger companies, with little or no participation except information sessions and the possibility to buy private shares for larger projects. Other initiatives are mainly in private hands, like private shares or individual solar panels. Cooperative initiatives are starting to emerge in Flanders, with the REScoop platform installed to support those projects. Real community initiatives, where a municipality or trust invests in renewable energy for the community, giving benefits for all those individuals within that community, are however not found in Flanders at the moment.

While this paper wanted to provide a preliminary overview of energy projects and their different methods of involving the public, it became clear that a complete and structured overview is missing. On the Flemish level the VREG (the Flemish regulator of the electricity and gas market) has statistics on the green certificates given to renewable energy producers, while Ruimte Vlaanderen (Spatial Development Department Flanders) has information on the construction permits of wind turbines. Furthermore the province of Vlaams Brabant provides a map that shows the climate neutral projects in their territory. Within these different overviews there is however no distinction between either the level

of participation or the initiator. The many different forms renewable energy projects can have, the many different initiators and the many different energy sources or mixes of energy sources provides a very complex picture. A picture, however that needs to be drawn in order to first of all list all the aspects of the energy transition, second of all to fully comprehend the diverse nature of energy projects and last but not least to get an understanding of public involvement in this transition.

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