

FACTORS SHAPING SOCIAL INNOVATION IN ENERGY

In the energy domain, social innovation initiatives can help speed up the transition towards a sustainable energy system. However, their impact on this overall goal depends on the format of the social innovations and the amount of initiatives which are in place. This is in turn strongly shaped by factors which vary between countries and which are discussed in this article.

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INTRODUCTION

There is a growing consensus around the world that social innovation (SI) can help address societal challenges in various domains. In the domain of energy, there are many of these challenges to overcome. For environmental reasons, a transition towards a renewable energy system needs to be made. SI initiatives such as energy cooperatives or other collaborations of consumers, businesses and governments can help to speed up this transition. During the SI-DRIVE project it became clear that the format and amount of SI initiatives differ widely between countries. In order to be able to understand how SI can lead to social change, it is important to know the factors shaping it. By addressing these factors, it is possible to create an environment in which SI can flourish.

This article is based on several research activities by the partners in the project. References to these reports are given at the end of this article. The factors presented are recognised and validated by the experts involved in the project as influencing SI.

FACTORS SHAPING SOCIAL INNOVATION IN THE ENERGY DOMAIN

A first factor shaping SI in the energy domain is the geography and the natural resources of a country. Some countries have indigenous fossil energy resources (such as the Netherlands, Poland and Romania) which reduce the incentive for sustainable energy and therefore SI. Other countries have excellent conditions for production of sustainable energy such as wind power (Denmark), hydro power (Sweden and Austria) or even tidal power (United Kingdom and Ireland). Following this, SI initiatives develop which use these conditions.

As a starting point for SI, the existing energy system, or status quo, differs in every country and influences SI. In France and Belgium, for instance, there are large capacities of nuclear energy. As these are already in place, the costs of abandoning them make it more difficult to stop using them. Existing production facilities can therefore hamper the growth of SI and other initiatives for sustainable production. However, this is also a political choice. In the case of Germany the existence of nuclear energy production facilities strengthened the wish to find sustainable (local) alternatives.

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A related factor is the energy policy in a country. Each EU Member State chooses its own particular way of implementing EU-targets on CO₂-reductions. Policies and the attention for SI therefore differ between the Member States. The research showed that non-coherent or unstable energy policy hinders the growth of SI. On the other side of the spectrum, funding and public support programmes stimulate the growth of SI. Other stimulating measures are removing administrative barriers and offering institutional support. Another difference is that there are countries such as Denmark and Austria where local governments cooperate directly with SI initiatives and countries with more hierarchical, central governance and less cooperation.

The legal system of a country influences the scope of action for SI. Traditionally, the legal systems of the Member States incorporated regulations designed for top down energy systems with large players and rather passive consumers. In order to create space for SI and consumers in general, most legal systems have to change significantly. An example is that active consumers (so-called prosumers)

should be able to supply energy directly to others. However, for instance in the Netherlands, this is not yet possible.

Another factor is the structure of the energy market. The energy markets of all EU Member States were liberalised following EU directives. These introduced competition into markets which were previously mostly governed by public monopolies. In a liberalised energy market, small enterprises and citizens are given the same opportunities to enter the market as the incumbents. From the results of the project it can be derived that SI flourishes more in countries with a stronger degree of liberalisation. In those countries barriers to enter the market are removed and it has led to the emergence of new market players such as SI initiatives. In other countries incumbents are still dominant, which makes it difficult for new players to enter the market.

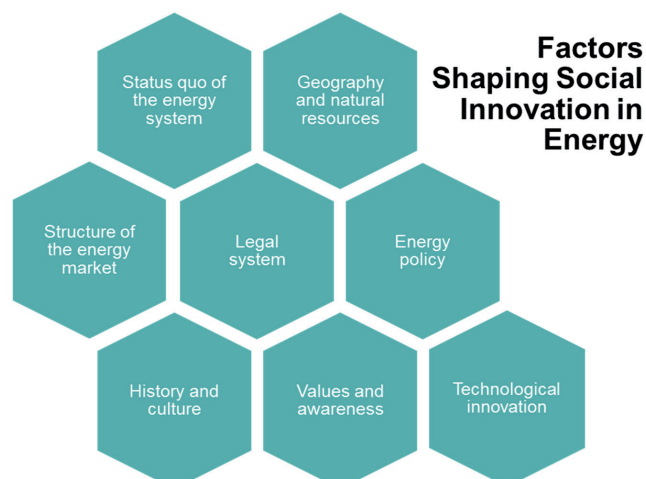
The history and culture of a country also influence SI. For historical reasons, in some Eastern European countries, trust among citizens and between citizens and government is rather low and cooperatives have a negative connotation. Because of that, energy cooperatives are less likely to develop there. In Denmark however, local cooperatives are historically and culturally embedded and are therefore an important part of the renewable energy system. Also the activities of initiatives are determined by history and culture. In countries, for instance, where families play a central role in society, it is more likely that initiatives will be directed at families.

Related factors of influence are the general values of people concerning sustainability and awareness of this topic. In some countries, citizens have strong positive values regarding sustainability and high awareness. This can stimulate the growth of SI since there will be more potential starters and followers of initiatives. Specific values which can foster SI are also the appreciation of local communities and active citizenship.

A last important factor stimulating SI in a country is technological innovation in renewable energy generation options, including solutions which allow small scale production and stimulate energy efficiency. When these technologies are available in a country, small-scale initiatives have the ability to produce energy, which is crucial for the development of SI. In countries with higher availability of the latest technology, also more initiatives will develop which make use of these technologies. Additionally, SI initiatives can grow and diffuse when these technologies are affordable and attractive business cases can be developed.

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Eight distinct factors shaping Social Innovation in Energy

FACTORS IN CASE STUDIES

The SI initiatives studied in the project all reflect, to a certain extent, the way these factors take shape in a country. In this paragraph we provide some examples. In the case 'Energy Lady and Energy Kid' in Turkey, for instance, women and children are provided with knowledge on how to save energy. This shows that there seems to be a lack of awareness, and that families play a central role in society. The case 'GoiEner' in Spain is an energy cooperative which is started in a liberalised market, and is using the latest technologies for producing renewable energy. Lastly, the case 'Model Region Thayaland' in Austria is an example of cooperation between the local government, businesses and citizens who strive to become more self-sufficient in their energy production. This reflects trust in each other and the ambitious goals reflect high values and awareness concerning sustainability.

CONCLUSION

The landscape of SI in energy is very diverse. Examples are energy collectives producing sustainable energy together, initiatives to raise awareness of the importance of energy saving or governments setting up programmes to collaborate with businesses and civil society to reach local goals. The format and amount of initiatives varies between countries, which is determined to a large extent by the national, regional and local context. The factors presented in this article play an overall role in different countries. By adjusting these factors, it is possible to improve the conditions for SI.

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