



Understanding the role of trust in power line development projects: Evidence from two case studies in Norway



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ABSTRACT

In recent years the processes of stakeholder involvement in power line development projects raised a critique of inflexible decision-making processes and calls for new participatory approaches. Given that attempts of Transmission System Operators (TSOs) to implement new forms of engagement are insufficient to explain the potential success behind stakeholders' participation, we investigated two cases in Norway characterized by high rates of acceptability, small opposition and satisfied stakeholders. In order to explain this phenomenon we conducted an experimental research based on an abductive procedure that has focused our attention on trust. Although trust has been mentioned by many scholars as important component of engagement processes, its multidimensionality has been presented in selective configurations. Drawing on interdisciplinary insights and empirical data, we develop the conceptual meaning of three dimensions of trust in grid extension projects: interpersonal, social and institutional; and we examine how they influence the stakeholder engagement process. Acknowledging diversified meanings of trust we suggest putting more attention to the informal aspects of stakeholder engagement. In this context, in order to build up trustworthy relationships with affected stakeholders, we propose recommendations to TSOs and respective decision-makers, addressing different trust dimensions.

1. Introduction

Growing electricity consumption, integration of more renewable energy sources (RES), ageing grids and challenges of balancing the system put a pressure on Transmission System Operators (TSOs) to modernize their electricity infrastructure (Battaglini et al., 2009; Bruckner et al., 2014; Späth and Scolobig, 2017). One of the biggest obstacles for building new electricity transmission lines is the lack of public acceptability and opposition at the local level (Battaglini et al., 2012; Cain and Nelson, 2013; Devine-Wright, 2013), despite of support for such infrastructural developments in general (Aas et al., 2014; Batel and Devine-Wright, 2015; Bell et al., 2005, 2013). Under existing procedural frameworks, combined with local opposition, the realization of projects in some cases can take up to twenty years or even be dismissed (Battaglini et al., 2012; Cain and Nelson, 2013).

Many scholars have tackled acceptability and/or opposition towards the energy infrastructure (see for example: Wüstenhagen et al., 2007; Zoellner et al., 2008). They investigated phenomena like justice (Gross, 2007; Keir et al., 2014; Walker et al., 2010), landscape issues (Cotton and Devine-Wright, 2012b; Cowell, 2010; Soini et al., 2011; Wolsink,

2007), socio-psychological aspects, like place attachment (Bell et al., 2013; Devine-Wright, 2013; Devine-Wright and Howes, 2010) or images, visualizations, understandings and associations of the energy infrastructure (Devine-Wright and Devine-Wright, 2009; Devine-Wright et al., 2010). Negative attitudes towards grid extension projects result from health concerns related to electro-magnetic fields (EMF), loss of property values, visual and noise impacts, land use attributes, psychological stigma and environmental risks (Cain and Nelson, 2013; Cotton and Devine-Wright, 2012b; Elliott and Wadley, 2012; Porsius et al., 2016). All these issues are related to stakeholder participation and decision-making processes criticized for top-down approaches, over-regulation and ingrained procedures (Aas et al., 2014; Batel et al., 2013; Battaglini et al., 2012; Cotton and Devine-Wright, 2012a; Keir et al., 2014; Komendantova et al., 2015). Affected stakeholders, understood here as “groups of organisations and individuals with vested interests or functions in power grid development projects” (Hildebrand et al., 2015), often feel powerless and dissatisfied with the engagement process, blaming TSOs for a “decide-announce-defend” approach.¹ Disappointment combined with stakeholders' concerns and expectations prior to the process, do not foster the acceptability of projects (Keir

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¹ Or a “command and control” approach (see Van Ark and Edelenbos, 2005).

et al., 2014; Knudsen et al., 2015; Porsius et al., 2016). Therefore, experts have called to design decision-making processes that to a larger extent would empower stakeholders (Devine-Wright, 2013; Devine-Wright and Batel, 2013; Komendantova et al., 2015; Späth and Scolobig, 2017; Whitton et al., 2015). There are examples of innovative approaches² strengthening stakeholder participation, but there is still a space for further improvements (Späth et al., 2014; Späth and Scolobig, 2017) and it remains challenging how to apply new forms of engagement with the formal, legally binding procedures (Richter, 2016). Decision-making and participation processes seem to focus on formal competencies (Wolsink, 2012), whereas there is a gap in understanding how the engagement is enabled and how different mechanisms between involved parties shape its outcomes (Bell et al., 2012). Even if TSOs test different engagement forms and tools, social processes accompanying the participation can play a more decisive role for its success (Voinov and Bousquet, 2010).

A focus on examples of local opposition or insufficiently carried out engagement processes, is not enough to understand the social context of the energy infrastructure and planning processes (cf. Aitken, 2010; Battaglini et al., 2012; Cain and Nelson, 2013; Devine-Wright and Devine-Wright, 2009; Ellis et al., 2007; Knudsen et al., 2015; Späth and Scolobig, 2017). Therefore we take a different approach. In this paper we investigate two cases of grid extension projects in Norway characterized by high rates of acceptability,³ relative small local opposition and satisfied stakeholders. The starting point is the question why in both cases the engagement processes have been carried out in a way that did not cause serious opposition towards the projects. It could be explained by higher levels of stakeholder's empowerment (Späth and Scolobig, 2017), implementation of novel approaches (Komendantova et al., 2015), perceived procedural and distributive justice (Devine-Wright, 2013; Knudsen et al., 2015) or by relative low levels of perceived risk in comparison to different technologies like radioactive waste (Flynn et al., 1992). However, acknowledging a need for a research considering social factors in energy systems (see for example: Demski et al., 2015), we concentrate on informal elements outside of regulated frameworks determining stakeholders' acceptability of the process (but not the decision itself), namely on trust. Basing on the literature review, combined with empirical data gathered during the project "Improved and Enhanced Stakeholders' Participation in Reinforcement of Electricity Grid" (INSPIRE-Grid), we discuss different dimensions of trust and its impact on the engagement process. We argue that high levels of trust dedicated to different types of actors and individuals, increase the acceptability of the decision-making process, what in result can, but does not have to, lead to the acceptability of new power lines. We propose measures that could be implemented by TSOs and regulatory authorities in order to build stocks of trust and to reduce tensions between (and among) stakeholders and a perceived process-owner. We see that trust building activities happen not only during the

² Forms (or tools) of informal stakeholder engagement are today applied by many European TSOs during all stages of the planning process. These are mostly voluntary, not formalized and not legally binding. Examples are: Town hall meetings, Roundtables, Mediation or Field visits, only to name a few. They differ not only in the structure of the audience but also in their aims and empowerment level (for a more detailed overview see: Späth et al., 2014).

³ For the purpose of this paper we use the term "acceptability" in order to use it for both case studies, since the process phase of both power lines projects was at different stages during our investigation: Bamble-Rød was a finished project and Aurland-Sogndal was at the early stage of stakeholder engagement. We are aware about conceptual differences between "acceptability" and "acceptance": the latter can be understood as a state regarded as proper, normal or inevitable (Batel et al., 2013: 2). It implies a general assumption that even if something is not ideal, it is probably the best compromise available. "Acceptability" refers to making all the best acceptable to the greatest number of people (Twichten, 2014). Moreover, "acceptability" refers to a given issue before its implementation (evaluation *ex-ante*), whereas "acceptance" refers to an attitude on this issue after it has been accomplished (evaluation *ex-post*) (Cowell et al., 2011; Schuitema et al., 2010). For a critical discussion on a term "acceptance" and a clear distinction from "support" see Aas et al. (2014) and Batel et al. (2013).

formal process, but also in-between or even outside of it. Therefore we suggest more attention to be given to the informal aspects or "soft factors" of stakeholder engagement.

In Section 2 we conceptualize three different dimensions of trust present in grid extension projects. The research approach is introduced in Section 3 and in Section 4 investigated case studies are described. Subsequently Section 5 presents our empirical findings and Section 6 concludes.

2. Theoretical approach – Trust and its conceptualizations

2.1. Theoretical underpinnings

This research was based on the theoretical framework developed intentionally for INSPIRE-Grid, focusing on the social elements of stakeholder engagement in grid extension projects, like values or beliefs (Lilley et al., 2014). After fieldworks in Norway we shifted the focus of the research to trust and we improved the existing theoretical framework (Ceglaz et al., 2017). It means that the explorative field research enabled gaining an inspiration for alternative hypotheses that were not included in the first framework. The detailed research approach is described in Section 3.

2.2. The relevance of trust

Trust is understood as a complex, multidimensional and context-dependent concept (Berardo, 2009; Goudge and Gilson, 2005; Höppner, 2009; Laurian, 2009; Petts, 1998; Straten et al., 2002). Rousseau et al. (1998: 395) explain trust as "a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behaviour of another". The open and vulnerable position results from the similar values of trustor and trustee⁴ (Siegrist et al., 2003) and trustworthy relations reduce the complexity of given issues as well as uncertainty (Van Ark and Edelenbos, 2005). Trust allows for flexibility in dynamic processes, characterized by changing circumstances, new information and problem definitions. It is considered as an indispensable component of a satisfying cooperation of diversified actors striving to solve environmental and social problems (Berardo, 2009; Cuppen, 2012; Höppner, 2009; Klijn et al., 2010; Lowndes and Wilson, 2001; Ostrom, 2010a, 2010b; Sharp et al., 2013). Trust has been investigated in the context of risky technologies, like CO₂ storage (Midden and Huijts, 2009), electromagnetic field (Siegrist et al., 2003), waste management (Petts, 1998) or genetically modified food (Poortinga and Pidgeon, 2005). Its importance has been emphasized by Huijts et al. (2012) that conceptualize it as one of the preconditions for the new technology acceptance. The issue of trust is also well embedded in social energy research. Sumpf (2017), for example, argues that we are witnessing a paradigm shift, from acceptance to trust. Although a combination of energy issues with trust is not a completely new area of research (see for example: Flynn et al., 1992), there are voices claiming that it is still underappreciated or that too much attention has been given to nuclear energy and nuclear waste sites (for the overview see: Greenberg, 2014). Nevertheless, scholars basing on a plethora of case studies, report trust as a pivotal element for fostering the acceptability of energy infrastructure, but they do it only in selective configurations: as trust in the relevant company, project developer, other members of the community and/or in public institutions (Aas et al., 2014; Aitken, 2010; Bell et al., 2005; Cain and Nelson, 2013; Cotton and Devine-Wright, 2012b; Demski et al., 2017; Devine-Wright and Devine-Wright, 2009; Devine-Wright, 2013; Devine-Wright and Howes, 2010; Flynn et al., 1992; Friedl and Reichl, 2016; Kalkbrenner and Roosen, 2016; Keir et al., 2014; Knudsen et al., 2015; Komendantova et al., 2015; Raven et al., 2009; Rayner, 2010; Walker et al., 2010; Wolsink, 2012).

⁴ A trustor is an actor doing trusting and a trustee is an actor being trusted.

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