

Poster Sessions

[P56] Wrong turn? Perceived justice and the treacherous route towards public acceptance of a wind park

Kevin Broecks [Netherlands]¹, [Frank Van Rijnsoever](#) [Netherlands]¹, Robert Harmsen [Netherlands]¹

Utrecht University¹

Introduction

Public acceptance of low-carbon innovations is crucial for a successful transition towards a sustainable society. Public acceptance consists of three dimensions socio-political, market and local acceptance. Socio-political acceptance for renewable energy technologies has been growing for years. Governments also use subsidy schemes and favorable tax regimes to increase market acceptance of these energies. Yet, local energy projects that have a large spatial impact often encounter fierce resistance from inhabitants that live in the vicinity, leading to the delay of cancelation of these projects. Examples are wind turbines on land, and carbon capture and storage. A number of papers propose communication strategies or other best practices to increase local public acceptance. Procedural justice (e.g. a fair engagement and decision making process), and distributive justice (e.g. fair distribution of benefits and losses among different stakeholders), are commonly used to explain public acceptance. Yet, little systematic data about local public acceptance over time context of wind energy on land, let alone about what causes changes in acceptance over time. In this paper we describe a project where the process of gaining acceptance failed, despite of all the effects made and we study how the types of justices influence the dynamics of local public acceptance. This allows us to draw lessons for future wind parks on land.

Methods

We use a mixed method approach using the case of the 'Windpark Houten', in the middle of the Netherlands. Our study is based on two evaluations that were commissioned by the municipality of Houten. The data consists of documents, interviews, survey data from 326 neighboring inhabitants at five moments in time (we currently have three, two are to be collected), and operational data from the turbines. To understand the process we use an event history approach. We first systematically map key-events over time from 1999 until now. Second, our survey measures public acceptance, and dimensions of perceived procedural justice (process evaluation) and distributional justice (perceived benefits and sources of disturbance) in 2015 and 2017 using Likert scales.

Findings

Event history analysis: In 1999, Houten was one of the first municipalities to formulate ambitions with regard to wind turbines on land. During the planning process, the municipality engaged in dialogues with neighboring residents. The park was developed by a local wind cooperation, and neighboring residents could participate financially with a discount. However in 2005, a new residential area with over 800 new houses was realized near the proposed site. After much delay, the park was finally realized in 2013. This was partly due to judicial procedures from existing and new neighboring residents against the park. To prevent disturbance from noise and drop shadow, the municipality implemented a specific, but complicated set of measures. Despite these measures local resistance against the park was high, the energy yield of the park was low, and the municipality was not able to properly enforce its own specific measures. Complaints were not always properly dealt with. After the first evaluation in 2015 the municipality postponed a second wind park, and engaged in a mediation trajectory with the most important stakeholders to solve the problems.

Statistical model: The results from the first survey that the distribution of public acceptance was low and many respondents were either fully against, or in favor of the park. The three largest sources of disturbance were a disturbed view, noise, and drop shadow. A regression model (adj. $R^2=0.53$) shows that public acceptance was positively related to dimensions of perceived procedural and distributive justice. A disturbed view contributed most to the explained variance. This is notable as the reduction of a disturbed view was not a municipal priority. The second disturbing largest explanation comes from procedural justice. Noise and drop shadow, were also significantly related to public acceptance, but to a lesser extent. Future analysis will reveal whether proposed changes will increase public acceptance. A third measurement has been conducted, but the results are confidential.

Conclusions

Local public acceptance is crucial for the successful implementation of local renewable energy solutions. The municipality went much further to seek public support than was required by law. Yet, stakeholder dialogues and other tools to gain support are no means to guarantee success. Navigating the route towards local public acceptance remains a precarious endeavor. Wrong turns in this process can seriously delay future projects at other sites as well, and delay the transition towards sustainable energy. Procedural and distributive justice are both important in this process. Our future data collection will reveal whether public acceptance changes over time, and whether the situation in Houten can be mended.